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City of Cambridge

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THE MAYOR'S ADDRESS

AT THE

ORGANIZATION OF THE CITY GOVERNMENT

JANUARY 5, 1903

AND

THE ANNUAL REPORTS

MADE TO THE CITY COUNCIL

FOR THE YEAR 1902.

PUBLISHED BY ORDER OF THE CITY COUNCIL
UNDER THE DIRECTION OF THE
CITY CLERK.

J.A.CUMMINGS
PRINTING CO.
172 OLIVER ST.
BOSTON.

SECOND INAUGURAL ADDRESS

OF

MAYOR JOHN H. H. McNAMEE

JANUARY 5, 1903

Gentlemen of the City Council:—

The will of our citizens that we should represent them in the transaction of their business affairs for the year of 1903 has been recorded. We should approach our duties as men, sensible of the great trust which has been placed in our hands, determined to solve to the best of our ability the many problems which shall come before us. We must never forget that we are the servants of the people, who will desire our services only so long as we faithfully and conscientiously perform the duties demanded of the exalted positions in which they have placed us.

It is our duty to scan carefully every measure and determine its value to our people. We must investigate carefully all propositions placed before us and determine what are the absolute necessities for which the people's money shall be expended.

We must so regulate our expenditures as to create the lowest tax rate possible. This our citizens have every right to expect, and they depend upon us to so manage that their expectations may be fulfilled. If we are to attract new residents and capitalists to our community we must show them that our affairs are conducted in a businesslike and economical manner with a care only for the public welfare.

We must demand that the several departments live strictly within the appropriations allotted to them at the beginning of the

year and that no debts for current expenses, which should be taken care of by us, shall be left to hamper the work of future administrations.

CONSOLIDATION OF DEPARTMENTS.

In order that there may be a more harmonious and economical management of the many departments of our City which operate in our streets, I recommend that you give special attention to legislation which shall have for its object the combining of these several departments under one head.

I am of the firm opinion that it would be greatly to our advantage if our Street, Park, Water, Sewer, Wire, Lamp and Engineering Departments could be placed under one controlling power.

UNPAID BOARDS.

From my observation of the workings of the various unpaid boards which control several of our departments, I believe they are a serious detriment rather than an advantage to a city as large as Cambridge has grown to be. Far better results could be obtained and at a greatly reduced expense if these departments should be placed in the hands of Superintendents who would be accountable to the Mayor for the proper performance of their duties. I am of the firm conviction that the correct method of conducting the affairs of a corporation, such as ours, is to place positive business responsibility upon the person chosen to control, and then give him the power to make his authority felt in every department.

I recommend your serious consideration of this subject, as I believe we should conduct all our business according to modern methods, and leave sentiment and tradition out of the question altogether.

LAND VALUATIONS.

I believe it is the wish of our citizens, as expressed in the election just passed, that a radical change in the manner of assessing land valuations should be made, and that in place of the slipshod method which has been in vogue, a fair and equitable scheme should

be outlined at once. While I know that this is a duty which should be performed by our assessors, still I believe the task will be of such proportions this year that we should grant them all the assistance in our power. Although I am in no wise sure as to the exact method which should be pursued, I believe that if your honorable body would enable the Mayor to appoint an Advisory Committee of paid experts, to work in connection with our Assessors, a comprehensive plan could soon be prepared which would be a guide for all future work in this department, and which would cure the evils which now exist. I therefore recommend that you give this matter immediate and careful attention, to the end that this Committee, if selected, will have ample time to consider the subject.

PUBLISHING OF LAND VALUES.

Many of the evils of the unfair placing of land values which have grown up in this City would be impossible of existence if our citizens were supplied with a convenient and complete list of valuations as placed by our Assessors on the first day of May each year. I therefore recommend legislation such as will produce this result.

OFFICE HOURS.

It has been my aim during the past year to adhere strictly to the law which demands eight hours only as a day's labor, and I have attempted to apply the same rule to all persons in the City's employ. I still feel that the convenience of our citizens demands that all offices in City Hall should have uniform hours for the transaction of business, and that these hours should be from 8 A. M. until 4 P. M., except on Saturdays. I therefore recommend legislation which will bring about this result.

REVENUE.

A few figures from the Auditor's Report will show you at a glance the amount of money which will be at our disposal for the

coming year, and may perhaps assist you in determining the share which should be granted each of the several departments for the proper carrying on of their work during the year.

Net valuation of the City November 30, 1902 .	$97,273,334 00
Assessed at $12.00 per thousand, gives . .	1,167,280 00
which is the legal limit of taxation of Cambridge for municipal purposes for 1903, outside of the Sinking Fund requirements, Interest on the debt, and State or County Taxes or Assessments.	
To this may be added the estimated revenue from other sources and the cash in the Treasury of	281,914 36
Making a total of	$1,459,194 36

which may be spent through the several City departments.

Added to this amount we have a borrowing capacity for the fiscal year of 1903 for City purposes, of $395,000.

INCREASE OF DEBT.

The Auditor's report also shows a net increase of our debt for the year just passed of $221,097.27. This increase has been caused chiefly by expenses upon the new Cambridge Bridge, Harvard Bridge, Smallpox Hospital, Cambridge and Metropolitan Parks, new schoolhouses on Willow and Elm Streets, improved sewerage, construction of new streets, and land damages consequent thereto, all of which was occasioned chiefly by circumstances beyond the control of the Executive.

OUR SCHOOLS.

The attention of the School Committee is called to the fact, that, while the tax payers of the City cheerfully support our schools, they are entitled to the most careful thought in the expending of money and the largest possible return in service for the amount expended.

There has been a tendency to increase the number of teachers in some schools more rapidly than the increase in pupils warrants. This is especially noticeable in the statistics of the High Schools.

New teachers should be employed only when absolutely needed and an inquiry into the time devoted to class work by master's assistants, teachers and directors throughout the City will show that some teachers are doing work which the City is paying others to do.

I would suggest that the schools might receive more benefit if masters and principals, who are paid high salaries, were required to devote more of their time to teaching than they do at present, as there would be less necessity for the great number of assistants and special teachers which we now employ. A careful revision of the list of teachers, by weeding out unnecessary assistants and requiring full services of the higher salaried teachers should increase the efficiency of and at the same time reduce the cost of our schools.

THE NEW WASHINGTON GRAMMAR SCHOOL.

Last year saw the completion and occupation of the school building known as the New Washington Grammar School. While I am not satisfied that this building, as completed, is according to the plans and specifications as originally agreed upon, I have done all in my power to have many of the defects remedied. I have made a settlement with the trustees of the Fessenden & Libby Company, the contractors, on the basis of a reduction of about $1,950.00 from their original contract price, and their claims for extras.

As this sum remains to our credit after all claims for deductions, on our side, and for extras, on theirs, have been adjusted, I feel that the City's interests have been protected as far as possible under the circumstances. There still remains the heating contract to be settled and I have no doubt but that the reductions which I shall demand will be made without recourse to the Courts. This closes one of the most disagreeable incidents in the history of our City and one, the like of which I sincerely hope will never be brought to light again.

WILLOW STREET SCHOOL.

The new schoolhouse in process of erection on Willow Street has been seriously delayed by the failure of the contractors. The

surety company which signed the bond for the completion of the work is about to make a new contract with a responsible firm who, I believe, will be able to finish the building in time to receive the pupils of that district at the opening of our school term next September.

ABANDONED SCHOOLHOUSES.

While we are upon the subject of schoolhouses, I desire to call your attention to the fact that four of our school buildings have already been abandoned, and that one is unfit for use owing to sanitary and other conditions and should be vacated immediately, more especially as there is a modern school building in the neighborhood, which could accommodate the pupils now housed there. I believe this matter should be looked into at once, and if possible these pieces of property should be disposed of in some manner and if it is deemed wise to sell them the money should be turned into our treasury.

A list of these schools is as follows: —

Dana School, Centre Street, assessed valuation . .	$6,300
Washington School, Brattle Street, assessed valuation .	35,000
Bridge School, Pioneer Street, assessed valuation . .	1,900
Dunster School, Concord Avenue, assessed valuation .	6,000
Allston School, Boardman Street, (destroyed by fire) valuation about	8,000

PUBLIC LIBRARY.

Last year I recommended that a sum of money be set aside for the maintenance of a Branch Library in Ward 11. It was found at that time to be an impossibility owing to lack of funds. I am hopeful that we may be able this year to place in that section this much-needed improvement.

POLICE DEPARTMENT.

The great increase in the population of Wards 10 and 11 calls our attention to the fact that in the very near future it will be necessary to establish a new station in that district. The house now occupied is in a very bad condition and should be abandoned as soon as possible. The Chief of Police recommends that a patrol wagon

with two drivers be placed in this district, but I am afraid this will be impossible until a new and more modern building suitable to the needs of this growing locality shall have been erected.

He also recommends that the cell-room in Police Station No. 2 be remodelled by taking out the brick cells and placing in their stead iron cages, thus giving seven additional compartments. This will obviate the necessity now existing of placing more than one prisoner at a time in each cell, and will give better light and ventilation and greater security.

FIRE DEPARTMENT.

Our Fire Department is in a fairly satisfactory condition but there are some sections of our City where the protection is entirely inadequate and, if it should be possible under the present condition of our finances, I hope you may be able to supply some of the pressing needs of this department. At all events, there should be provided at once a building suitable for the storing of some of our extra pieces of apparatus.

The Chief is of the opinion that a building should be erected, somewhere near the junction of Garden and Sherman Streets, which would be suitable to house a ladder-truck and an engine. While it would be unnecessary to purchase an engine at this time I heartily coincide with him as to the ladder-truck and a carriage arranged with chemical tanks.

A conservative estimate of the cost would be: —

House and land	$25,000
Ladder truck	3,000
Combination hose wagon	2,500
Equipment	2,500
Total	$33,000

Cost per year for maintenance, about $10,000.

STREET DEPARTMENT.

The work in this department, owing to the great number of special appropriations, has been sometimes very perplexing and difficult and has taxed our resources in an unusual manner. The

equipment is in splendid shape — the stables, sheds, stone-crushing plants, etc., being in the best of repair. Our horses, harnesses, carts and other appliances show the painstaking care of the men employed and the pride which they take in all their work.

The report of the Superintendent of Streets shows that $270,-555.22 was spent by this department last year. Portions of Brookline and River Streets were paved with vitrified brick and parts of six other streets were paved with granite blocks.

The amount expended for cleaning streets was about $32,500.00. This was $2,500.00 in excess of the appropriation and had to be provided for out of the sum set aside for maintenance.

Mr. George M. Clukas, the very efficient clerk who has served the City faithfully for fifteen years, has made other arrangements for the future, and we shall be obliged to engage the services of a new assistant to fill this position.

DISPOSAL OF REFUSE.

The time has now come, and can no longer be delayed, when we must provide a method of disposing of our ashes, rubbish, etc. Thus far we have been able to deposit this matter in different parts of the lowlands of the City, although much to the discomfort of the people whose homes are in those localities. As about all the available space for this purpose is in many sections already taken up, a departure from this primitive to some more modern method is a real necessity and is a subject your honorable body will need to take under consideration.

WATER BOARD.

The receipts of this department for the year were : —

Total receipts	$336,682 11
Abatements and refunds	6,985 63
Net cost	$329,696 48

which sum was disposed of as follows : —

Maintenance	$73,957 19
Interest	132,739 00
Sinking Fund	123,000 29
	$329,696 48

ELECTRICAL DEPARTMENT.

The Superintendent reports, that, after examining carefully the cost of manufacturing gas, he will recommend that a reduction in price be sought for next year through the proper channels.

He also recommends that apparatus for testing gas used for domestic purposes be bought, in order that our gas supply may be tested once each month, by some person appointed for that purpose, to the end that the percentage of carbonic oxide may be kept down.

He finds that the percentage of this dangerous ingredient has increased from 5.15 per cent. in 1899 to 9.8 per cent. in 1901.

OVERSEERS OF POOR.

This department has not been managed in the liberal spirit which I believe should obtain in a city such as ours. I suggest to the members of the Board of Overseers of Poor that they instruct their agents to so conduct themselves towards the poor unfortunates who appeal to them for aid, that they may become what our City desires them to be, the humane dispensers of her charity.

I have never believed that Cambridge desired this work to be performed in the manner so well described as

> "The organized charity, scrimped and iced
> In the name of a cautious, statistical Christ."

INSANE POOR.

During the year just passed I have attempted to look into the condition of our insane poor in State institutions, and I am pleased to say that as far as I am able to judge from the visits made by me they are well treated and as comfortable as their unfortunate condition will permit.

BOARD OF HEALTH.

More than ordinary attention has been called to the workings of this department owing to the prevalence of small-pox during the

early part of the year. Too much praise cannot be given to the Medical Examiner for the manner in which he performed his work during this trying period. The untiring devotion to the duties of his office, and the bravery shown by himself and his assistants should not soon be forgotten by our citizens. During the height of this terrible scourge, which occurred during the summer, it was feared that upon the advent of colder weather this disease would break out with still greater virulence. Owing to the energetic measures instituted by our Board of Health, this has not proved to be a fact, and I am happy to say there are but few cases in our special hospital today.

OTHER DEPARTMENTS.

The work of the various other departments has been followed by me with a great deal of scrutinizing care. A careful reading of the various reports, which are to be found in our City Document, is really a necessary task if a thorough knowledge is to be obtained of the manner in which our work is being performed, and of the necessity or otherwise for the various amounts which will be asked for by the different agents by whom this money will be expended.

GENTLEMEN OF THE CITY COUNCIL: —

Our citizens are jealous of the fair name of their beloved City, therefore let our conduct this year be such, that when we look back over our work, we may be enabled to say with pride, that under our guidance Cambridge advanced in moral and material prosperity.

I hope that we may be able to work in such harmony that our City will receive the benefit of a purely business administration.

ANNUAL REPORTS

REPORT OF THE CAMBRIDGE WATER BOARD

CAMBRIDGE, December 13, 1902.

To the Honorable, the City Council of the City of Cambridge :—

The thirty-eighth annual report of the Cambridge Water Board, for the year ending November 30, 1902, is hereby submitted for your consideration.

The different reservoirs of the City, with the appurtenances, including the channels of Hobbs Brook, and of Stony Brook, the main supply pipe, and distributing pipes, pumping station, engines and boilers, and other machinery and appliances, are all in good order and condition and equal to the high standard of previous years. Repairs have in some cases become necessary, especially upon a portion of the main supply pipe from Stony Brook, and an allowance for such repairs will have to be made in the appropriation for maintenance for the ensuing year.

A few suits for damages for land taken, and for damage to land, are still pending, and it is hoped that these suits will be adjusted during the coming year. When they shall be adjusted, an appropriation for Construction Account will have to be made and provided for, by the issue of bonds as usual.

FINANCIAL STATEMENT IN BRIEF.

The total cost of the Water Works to November 30, 1901, was .	$5,702,428 23
There was expended during the year on Construction Account .	21,873 37
So that the total cost to November 30, 1902, was	$5,724,301 60

WATER BOND ACCOUNT.

The whole amount of bonds outstanding is	$3,350,600 00
Deducting from this sum the present value of the Water Debt Sinking Fund, exclusive of the note of the City for $200,000 .	907,635 98
Leaves as the net Water Debt	$2,442,964 02
For further details of the financial condition of the department, reference may be made to the statement of the Registrar appended to this report. From that statement it appears that the excess of receipts over expenditures during the past year is the sum of	$2,171 54

FRESH POND.

In making up the annual estimates for the year, the Board recommended an appropriation of $10,000, for the purpose of completing in

part the unfinished work around Fresh Pond, in the vicinity of the corner of Concord Avenue, at and near the corner of Huron Avenue. This work has been done in a thorough and substantial manner, and in accordance with the original designs of Messrs. Olmsted Brothers, the landscape gardeners, who have planned other improvements heretofore made at Fresh Pond, and the result has been a great increase in the beauty of the landscape, and has been much commended by all who have visited the place.

It is admitted by those interested in park work, that the Fresh Pond surroundings have the best natural advantages for park improvement of anything in the Metropolitan Park District, and all that is needed to complete the work is the necessary funds. When this task is finally completed we shall not only have something of which Cambridge may well be proud, but also a great contribution to health in that locality, for in the course of this work, the low, marshy, malarial lands adjoining the Pond, are being filled to a level that removes all danger of malaria, mosquitoes, and everything detrimental to good health. If this City is to have parks it would seem the height of folly not to finish the Fresh Pond Park System, especially since the land is already owned by the City. Fresh Pond Park is, in area, considerably more than one-half of the whole park system of the City.

It should also be borne in mind that, since the park work was begun in 1896, all the expense connected with the work has been paid out of surplus water receipts, and none of it from the general tax levy. Moreover the money expended on this improvement is all expended for labor, performed by the laboring men of Cambridge. It is earnestly hoped that this work may be advanced more rapidly in the future, and especially that Kingsley Park may be finished from the next appropriation for this purpose.

WATER BASINS.

On the first day of December, 1901, the water in Hobbs Brook Reservoir was one foot nine inches below high water mark, Stony Brook was overflowing the dam, and Fresh Pond was about two feet below high water mark. On the first day of December, 1902, the water in Hobbs Brook Reservoir was two and one-half feet below high water mark, Stony Brook Reservoir was four inches below high water mark, and Fresh Pond was three feet three inches below high water mark. The shrinkage in Fresh Pond is not immediately alarming, but deserves careful consideration in view of the increased total consumption of water, hereinafter referred to, and especially in view of the fact that the main supply

pipe, from Stony Brook to Fresh Pond, has been delivering water to the Pond at its utmost capacity, during the whole year, and yet it is impossible to keep the Pond full.

STONY BROOK OVERFLOW.

The overflow at Stony Brook, which, as the City Council is aware, occurs almost wholly in the Winter and Spring, and which runs to waste in Charles River, for the reason that there is no storage basin below the dam, except Fresh Pond, (and no pipe sufficient to carry the water to it, if there were such a basin) for the year ending December 1, 1902, amounted to . . . . . 6,539,100,000 gallons.
The overflow for the previous year was . . 6,141,300,000 "

The excess this year being . . . . 397,800,000 gallons.

It is unfortunate that there is no possibility of constructing a storage basin, between the dam at Stony Brook and Fresh Pond, and that the storage capacity of Fresh Pond is so limited in extent; otherwise, when a new supply pipe shall have been laid, as will become necessary in the near future, a portion of the water so wasted could be saved.

CHEMICAL EXAMINATION OF WATER FROM FRESH POND.— AVERAGES BY YEARS.

Parts per 100,000.

	Free Ammonia.	Clorine.	Nitrogen as Nitrates.	Nitrogen as Nitrites.
1893	.0106	.58	.0285	.0006
1894	.0063	.66	.0183	.0007
1895	.0054	.69	.0221	.0004
1896	.0020	.72	.0372	.0006
1897	.0046	.66	.0265	.0006
1898	.0069	.60	.0320	.0006
1899	.0048	.56	.0332	.0005
1900	.0088	.54	.0128	.0005
1901	.0026	.54	.0323	.0003
1902 (11 months)	.0047	.55	.0316	.0004
Average for past 10 years	.0057	.61	.0275	.0005
For two years ending May 6, 1889	.0134	1.37	.0281	.0007

The above analyses indicate that the quality of the water in Fresh Pond has suffered no deterioration during the last ten years, and it may be added, that it compares very favorably with the water supplies of most other cities. The analysis of the two-year period ending May 6, 1889, is added, to show the progress made since that date.

The amount of chlorine in the water is one of the most conclusive indications of pollution or non-pollution; reference being had, of course, to the normal chlorine of the district. The normal chlorine at Fresh Pond is 0.45. The above table shows great improvement in that respect since 1889. The free ammonia, also an item of suspicion, has been greatly reduced since that date. The normal chlorine of Fresh Pond is taken from the map of normal chlorines, or isochlors, annexed to the Report of the State Board of Health for the year 1890.

RAIN-FALL.

The annual rain-fall for the past ten years at Fresh Pond is as follows: —

	Inches.
1893	40.49
1894	35.85
1895	47.12
1896	38.82
1897	42.53
1898	52.42
1899	37.28
1900	46.89
1901	46.20
1902	43.31
Average	43.09

The rain-fall for the year at Hobbs Brook was 42.24 inches; at Stony Brook, 44.58 inches.

CONSUMPTION OF WATER.

The total consumption of water for the year ending December 1, 1902, was	2,930,553,545	gallons
For the year ending December 1, 1901	2,785,156,440	"
Excess of consumption this year	145,397,105	gallons
The excess of consumption in the year ending December 1, 1901, over the year ending December 1, 1900, was	133,879,200	"
Difference — excess of 1902 over excess of 1901,	11,517,905	gallons

In 1892 the total consumption was 1,961,362,760 gallons. The annual increase, or decrease, since that year is fully shown in the Report of the Engineer, herewith filed.

These figures deserve careful study, and ought to impress upon the City Council the fact which the Board has heretofore repeatedly urged upon preceding City governments; namely, that something must be done to increase the supply at Fresh Pond, or diminish the consumption of water by checking waste. Before many years, both methods must be

adopted. The idea that water is as abundant as air, to be used as lavishly, and wasted at pleasure, has long been exploded. Inasmuch as the Metropolitan Board, having under their control the Nashua River, and the enormous basin which they have constructed among the hills of Worcester County, are already apprehending a scarcity of water, and are recommending the general use of meters, in order to check unnecessary consumption, it behooves Cambridge not to neglect the lesson. The Board do not enjoy playing the rôle of Cassandra all the time, but would be derelict in their duty, if they did not repeat what they have said in previous reports and communications, that something ought to be done at once, to adjust the capacity of our water supply to the increasing demands of the growing population of the City.

FIRST REMEDY — METERS.

The daily *per capita* consumption of water, including metered and unmetered water, in 1902 was . . .	85.27	gallons
The daily *per capita* consumption of water, including metered and unmetered water, in 1901 was . . .	80.87	"
Increase	4.40	gallons
The daily *per capita* consumption of metered water in 1902 was	27.37	gallons
The daily *per capita* consumption of metered water in 1901 was	23.22	"
Increase	4.15	gallons

These figures include both water used for domestic purposes and water used for manufacturing purposes (which latter is all metered).

The total consumption of metered water used for business purposes only, during the year 1902, was 110,903,000 gallons in excess of such consumption in 1901, indicating that the most of the increase of total consumption for the year was due to increased use of water in manufacturing. This excess is equal to a consumption *per capita* of 3.54 gallons, which nearly accounts for the increase *per capita* of metered water above shown; *viz.*, 4.15 gallons.

A separate canvass of 812 domestic meters set last year, covering a population of 8,407, shows that the daily *per capita* consumption of water used for domestic purposes only, was 35.87 gallons.

These figures indicate plainly enough, what has never been questioned by any one familiar with the subject, that the use of meters greatly decreases waste of water.

The Board have corresponded with the Water Boards of many cities and towns using meters, and their testimony is uniformly to that effect. The correspondence is at the service of any member of the City Government, but is too voluminous to be inserted in this report. Among the

cities and towns reporting a reduction in the consumption of water, as the result of setting meters, are the cities of Brockton, Brookline, Fitchburg, Hartford, Lynn, Lowell, Fall River, Manchester, N. H., New Bedford, Newton, Pawtucket, R. I., Providence, R. I., Springfield, Waltham and Worcester.

The attitude of the Metropolitan Board has already been referred to, and has been approved by Governor Crane, in his message to the General Court of 1902.

A brief extract from the message is as follows : —

"The Water Board last year called attention to the great increase from year to year in the consumption of water in the district, and its successor has begun extended investigations relative to the excessive use and waste of water. This increase not only necessitates a great increase in current expenses, but it hastens the time when still greater expenditures must be incurred, not only for new sources of supply, but also for new pumping facilities, new aqueducts, and new pipe mains. There is undoubtedly a considerable consumption of water which is excessive and wasteful, and which can be prevented. Some method should be devised by which every city and town, if not every individual water taker, shall be financially interested in the prevention of waste, and of excessive use of water.

Meters have been introduced into some municipalities with beneficial effect. It is now worthy of consideration, whether the use of meters, wholly or in part, ought not to be compelled, or at least whether some measure may not be adopted, whereby municipalities and water takers shall be encouraged in the use of meters, by the promise of financial advantage."

The Chief Engineer of the Metropolitan Board, in his annual report to the Board, says : —

"It is time that measures should be taken to prevent or restrict the waste and excessive use of water, and there is no method by which this can be done so efficiently, as by providing that water shall be furnished to each water taker through a meter. Some legislation should be enacted by which the several cities and towns shall be induced, or required, to introduce meters, so that, at the end of ten years, all or nearly all of the water supplied to takers shall be furnished through meters."

In previous communications to the City Council, the Board have already expressed the same view that the Governor takes in his message, namely : that the excessive use and waste of water hastens the time when greater expenditures must be incurred for new aqueducts and new pipe mains. The longer this time can be postponed, the more saving can be

made in expense. If, for instance, by the aid of a complete meter system, the laying of a new main pipe from Stony Brook can be postponed for five years, the interest and sinking fund payments for five years, upon the bonded debt which will be necessarily incurred for such pipe, less the much smaller interest account on the amount of bonds issued for meters, will be saved to the City.

The City has now in use, in all, two thousand one hundred and thirteen meters. To fully provide all domestic supplies with meters, would require about eight thousand additional meters, at an estimated cost of ninety-six thousand dollars.

Inasmuch as about one-fifth of the requisite number of meters have already been set, by authority of the City Council, and with its approval, it seems unwise not to complete the work as soon as possible.

Moreover, it may be questioned whether it is fair to charge the water takers having meters, according to meter rates, and the other water takers, schedule rates. If the meters are financially a disadvantage to the consumer, as some claim, one-fifth of the consumers should not be placed in a worse position than the remaining four-fifths. On the other hand, if the meters are financially a benefit (as they certainly are to the careful consumer) the four-fifths are entitled to the same privilege as the one-fifth.

It is plainly just that each water taker should pay only for the water which he uses, and wastes, and should not be obliged, as he now is, (unless he has a meter) to pay also for what his neighbor uses and wastes.

The Water Board unanimously recommend, as the first remedy to be applied, the immediate installation of a complete meter system, and, to that end, advise the appropriation of a sum of twenty-five thousand dollars, to be charged to Water Works Construction Account, and met by an issue of bonds to be paid out of Water Works receipts, in the manner provided by law. This sum will probably provide for all the meters that the Board can set during the year, No new application to the Legislature would be necessary to provide for the issue of bonds for this purpose, as a sufficient number, heretofore authorized, remain unissued.

SECOND REMEDY, NEW PIPE LINE.

If the City Council decide not to concur with the views of the Board, above expressed, immediate provision should be made for a new pipe line from Stony Brook to Fresh Pond, so that the Pond may be kept full enough to meet the growing consumption, until the other remedy, a complete meter system, shall also become necessary, as it undoubtedly will. This enterprise will necessarily consume considerable time. The first

step must be the presentation to the Legislature, of a petition for the issue of the necessary amount of water bonds, in order to pay for the construction of the line.

Under the joint rule of the two branches of the Legislature, ("12th joint rule,") this petition should be presented before the first Wednesday of February. The petition must be authorized by vote of the City Council. If granted by the Legislature, the next step will be a complete survey of the line by a competent engineer. This will probably consume at least a year, especially as there are some difficult problems to be solved, in connection with such variations from the old route as are sure to be necessary. The proposals for pipe, contracts for pipe, and procuring the pipe will involve a considerable delay, and lastly, the actual construction will probably consume another year, possibly two years. Hence the first step must be taken at once. From estimates made by engineers, the cost of construction, including land damages, would not be less than five hundred thousand dollars. Consequently, in the event that the Council sees fit not to make the requisite appropriation for the purchase of meters, the Board recommend the immediate passage of an order, authorizing the Mayor to petition the Legislature for authority to issue bonds to the amount of five hundred thousand dollars, for Water Works Construction, (in addition to the amount already authorized, but not issued), according to the provisions of Chapter two hundred and fifty-six of the Acts of the year 1884 and the amendments thereto.

During the year, the Board recommended to the City Council, the abolition of the annual charge of $2 for meter rental, thereby making the net minimum charge for metered water $5; a charge, as the Board are informed, much less than the average minimum charge for metered water in other cities. This change is especially for the benefit of small consumers, and the proposed minimum charge is less than the minimum charge for ordinary domestic use under schedule rates.

This recommendation of the Board was referred to the Committee on Water Supply, who made a favorable report to the City Council, and referred the recommendation to the Committee on Ordinances, which has not yet reported. The Board hope that the City Council will see that this amendment is incorporated into the ordinances early during the coming year.

Respectfully submitted,

WILLIAM B. DURANT,
STILLMAN F. KELLEY,
GEORGE H. HOWARD,
WELLINGTON FILLMORE,
EDMUND H. STEVENS,
Cambridge Water Board.

REPORT OF THE WATER REGISTRAR

WATER REGISTRAR'S OFFICE,
CAMBRIDGE, December 3, 1902.

To the Cambridge Water Board:—

GENTLEMEN:—In compliance with the requirements of the City Ordinance I present the thirty-eighth annual report of the operations of this department showing the receipts, expenditures and abatements, together with a statement of the number of water takers, etc., for the year ending November 30, 1902.

Amount of bills remaining unpaid November 30, 1901:—

Water rates	$428 34
Supplies and repairs	1,004 51
Off and on	118 00
Seals	6 00
Maintenance account	393 91

Amount of bills placed in hands of City Treasurer for collection from November 30, 1901, to November 30, 1902:—

Water rates	$332,345 99	
Supplies and repairs	4,146 42	
Off and on	504 00	
Rents	168 00	
Seals	111 25	
Maintenance account	1,685 27	
Construction account	827 13	
Total bills		$341,738 82

There has been collected:—

Water rates	$326,500 53
Supplies and repairs	3,849 15
Off and on	488 00
Rents	168 00
Seals	107 50
Maintenance account	1,583 30
Construction account	749 50

There has been abated: —

Water rates, off and on, and seals, supplies and repairs, and Construction account	$3,985 63	

There remains uncollected: —

Water rates	$2,347 12	
Supplies and repairs	1,281 33	
Off and on	126 00	
Seals	9 25	
Maintenance account	465 88	
Construction account	77 63	
		$341,738 82

EXPENDITURES.

Construction (General account)	$32,943 59	
Maintenance (General account)	63,960 34	
		$96,903 93

ABATEMENTS.

Water rate, and supply and repair bills to the amount of	$3,985 63

REFUNDS.

Water rates to the amount of	$3,000 00	
Which amount deducted from receipts	326,500 53	
Leaves net receipts for water	$323,500 53	
Add off and on, fines, rents, seals and Maintenance account	2,346 80	
Makes net receipts of rates, fines, etc.		$325,847 33

OFF AND ON.

Water has been shut off for non-payment of rates, or per order on account of vacancy, and seals have been applied to fixtures by request of owners, as follows: —

Water shut off in 1902	579
Supplies let on, shut off in 1902	425
Supplies let on, shut off in previous years	109
New supplies let on	148
Seal locks applied to fixtures in 1902	728
Seal locks removed, put on in 1902	380
Seal locks removed, put on in previous years	470

Statement of yearly revenue received from water rates since the purchase of the works by the City: —

From April 28, 1865, to December 1, 1865	$32,367 19
From December 1, 1865, to December 1, 1866	40,073 27
From December 1, 1866, to December 1, 1867	53,733 62
From December 1, 1867, to December 1, 1868	63,747 42
From December 1, 1868, to December 1, 1869	76,149 30
From December 1, 1869, to December 1, 1870	92,605 95
From December 1, 1870, to December 1, 1871	111,782 65
From December 1, 1871, to December 1, 1872	127,201 30
From December 1, 1872, to December 1, 1773	146,117 32
From December 1, 1873, to December 1, 1874	153,634 27
From December 1, 1874, to December 1, 1875	138,880 37
From December 1, 1875, to December 1, 1876	179,166 76
From December 1, 1876, to December 1, 1877	154,843 59
From December 1, 1877, to December 1, 1878	157,443 91
From December 1, 1878, to December 1, 1879	164,681 90
From December 1, 1879, to December 1, 1880	173,325 49
From December 1, 1880, to December 1, 1881	170,062 73
From December 1, 1881, to December 1, 1882	177,430 80
From December 1, 1882, to December 1, 1883	179,361 89
From December 1, 1883, to December 1, 1884	161,526 27
From December 1, 1884, to December 1, 1885	185,544 36
From December 1, 1885, to December 1, 1886	199,404 43
From December 1, 1886, to December 1, 1887	204,748 64
From December 1, 1887, to December 1, 1888	211,156 27
From December 1, 1888, to December 1, 1889	221,124 70
From December 1, 1889, to December 1, 1890	231,116 32
From December 1, 1890, to December 1, 1891	227,054 53
From December 1, 1891, to December 1, 1892	237,527 08
From December 1, 1892, to December 1, 1893	242,219 78
From December 1, 1893, to December 1, 1894	250,032 71
From December 1, 1894, to December 1, 1895	268,813 62
From December 1, 1895, to December 1, 1896	281,030 00
From December 1, 1896, to December 1, 1897	291,457 62
From December 1, 1897, to December 1, 1898	297,129 78
From December 1, 1898, to December 1, 1899	302,569 00
From December 1, 1899, to December 1, 1900	319,479 37
From December 1, 1900, to December 1, 1901	320,468 01
From December 1, 1901, to December 1, 1902	323,500 53

Comparative Statement.

	1901.		1902.	
Construction Account. (Hobbs Brook Reservoir.)				
Received.				
From bonds issued				$6,000 00
Expended.				
Construction of reservoir, land settlements, etc			$5,447 60	
Services of City Solicitor			500 00	
Balance to credit of Construction Account			52 40	
				$6,000 00
Construction Account. (General.)				
Received.				
Balance from 1901			$13,998 20	
From bonds issued	$30,000 00		2,500 00	
From premium on bonds	1,530 00		724 65	
From balance of 1900	14,575 52			
From sale of old material, etc	91 39		749 50	
		$46,196 91		$17,972 35
Expended.				
Sundry bills and pay rolls	$32,198 71		$16,999 14	
Balance to credit of Construction Account	13,998 20		973 21	
		$46,196 91		$17,972 35
Maintenance Account.				
Received.				
From "rates, fines, etc."	$321,410 01		$331,249 66	
From sale of shrubs, grass, etc	2,561 38		1,583 30	
Supply and repair account	5,253 08		3,849 15	
		$329,224 47		$336,682 11
Expended.				
Care and repairs			$62,298 87	
For work at Fresh Pond			9,996 85	
Interest on water debt	$127,109 00		129,579 00	
Sinking fund requirements	119,703 75		120,828 75	
Rent of offices			1,200 00	
Care and repair, pipes and fittings	79,239 18			
Ice for drinking fountains	447 11		461 47	
Abatements	76 38		3,985 63	
Refunds			3,000 00	
Interest of 1902 unpaid and reappropriated for 1903			3,160 00	
Excess of receipts	2,649 05		2,171 54	
		$329,224 47		$336,682 11
Maintenance Account, excess of receipts		$2,649 05		$2,171 54

The excess of receipts shown above, amounting to $2,171.54, has been carried to the sinking fund as required by law.

In addition to the manufactories, business blocks, houses, etc., supplied through meters, water is supplied to 17,488 families, 600 stables, 1,839 horses, 98 cows, 166 shops, and 344 offices and stores, by the following fixtures, viz: —

20,474 faucets,	34 urinals,
7,475 wash basins,	8 yard hydrants,
10,637 wash tubs,	2 fountains,
7,001 bath tubs,	14 tumbler washers,
200 slop closets,	1,753 hand hose,
17,837 pan closets,	6 motors.
3 hopper closets,	

Also,

978 fire hydrants (beside 19 on private premises).
8 fire reservoirs.
28 drinking fountains in public squares.
59 street watering standpipes.
4 public sanitaries.

The above schedule of fixtures does not include those in schoolhouses, engine houses, police stations, and other City buildings, or where the use of water is covered by meter.

The usual house-to-house inspection has been made with very satisfactory results.

Respectfully submitted,

WALTER H. HARDING,
Registrar.

ANNUAL STATEMENT OF THE WATER REGISTRAR TO THE COMMITTEE ON ACCOUNTS, DECEMBER 1, 1902.

Water rates unpaid November 30, 1901	$428 34	
Supplies and repairs unpaid November 30, 1901	1,004 51	
Off and on bills unpaid November 30, 1901	118 00	
Seals bills unpaid November 30, 1901	6 00	
Maintenance bills unpaid November 30, 1901	393 91	
		$1,950 76

Bills placed in the hands of the City Treasurer for collection from December 1, 1901, to December 1, 1902: —

Water rates	$332,345 99	
Off and on water	504 00	
Seals	111 25	
Rent	168 00	
Supplies and repairs	4,146 42	
Maintenance bills	1,685 27	
Construction bills	827 13	
		$339,788 06
Total bills		$341,738 82

There has been collected: —

Water rates	$326,500 53	
Off and on ledger	488 00	
Rent ledger	168 00	
Seals	107 50	
Maintenance account	1,583 30	
Construction account	749 50	
Supply and repair bills	3,849 15	
Total collections		$333.445 98

There has been abated: —

Water rates, off and on, and seals, supplies and repairs, and Construction account	$3,985 63

There remains uncollected:—

Water rates	$2,347 12		
Supplies and repairs	1,281 33		
Off and on	126 00		
Seals	9 25		
Maintenance account	465 88		
Construction account	77 63		
		$4,307 21	$341,738 82
Total bills for collection		$341,738 82	
Less abated	$3,985 63		
Less refunded	3,000 00		
Less unpaid	4,307 21		
		$11,292 84	
Net receipts			$330,445 98

Attest: WALTER H. HARDING,
Registrar.

CAMBRIDGE, December 1902.

I have examined the accounts of the Water Registrar and find that they correspond in the amounts collected, abated, refunded and uncollected with the statement submitted by the City Treasurer and verified by the City Auditor.

STILLMAN F. KELLEY,
Committee on Accounts.

CITY OF CAMBRIDGE,
OFFICE OF CITY TREASURER,

December 1, 1902.

To the Cambridge Water Board: —

GENTLEMEN: — I give you herewith a record of the transactions between the Water Office and the City Treasurer's Office during the year ending November 30, 1902.

Gross collections for account of Water Works, "Water Rates," "Maintenance" and "Supply" Accounts	$336,682 11
Gross collections for account of Water Works "Construction" . .	1,474 15
"Abatement" certificates received and paid on "Water Rates" .	3,985 63
"Refund" certificates have been presented, and paid to amount of .	3,000 00
Uncollected bills in my hands Nov. 30, 1902, for account of "Water Rates," "Maintenance" and "Supply" Accounts	4,229 58
Uncollected bills Nov. 30, 1902, for account of "Construction" . .	77 63

Very respectfully,

W. W. DALLINGER,
City Treasurer.

I have examined the above statement and find it correct.

HARRY T. UPHAM,
City Auditor.

REPORT OF THE SUPERINTENDENT OF WATER WORKS

CAMBRIDGE, December 4, 1902.

To the Honorable Water Board of the City of Cambridge : —

GENTLEMEN : — Complying with the City Ordinance, I herewith submit the twenty-eighth annual report of the Superintendent, for the year ending November 30, 1902.

	Gallons.
Total water pumped	2,930,553,545
Quantity of water sold by meter	940,768,200
Quantity of water used for sprinkling streets	80,907,175
Quantity of water used for flushing sewers	6,250,000
Quantity of water used for cleaning sanitaries	7,500,000
Quantity of water used for public buildings	39,804,500
Quantity of water used for drinking fountains	35,000,000
Quantity of water used for testing meters	57,500
	1,110,287,375

Number of gallons daily for each inhabitant on the total amount pumped, 85.27.

Number of gallons daily for each inhabitant on total amount used by domestic meters, and including water used for fire purposes, for flushing pipes, blowing off dead ends, puddling trenches and water used for hose and private stables, 54.24.

COMPARATIVE STATEMENT OF TOTAL PUMPING DURING THE PAST TEN YEARS.

Date.	Total Yearly Pumping.	Increase or Decrease.	Average Daily Pumping.	Increase or Decrease	Gallons to each inhabitant daily.
1893	2,234,863,924	273,501,164 increase	6,122,915	764,000 increase	74.50
1894	2,127,878,627	106,985,297 decrease	5,829,804	293,111 decrease	69.19
1895	2,190,781,892	62,903,265 increase	6,002,142	172,338 increase	71.65
1896	2,413,506,557	222,724,665 "	6,594,280	592,138 "	75.90
1897	2,441,340,196	27,833,639 "	6,688,603	94,323 "	76.46
1898	2,792,321,110	350,980,914 "	7,650,195	961,592 "	85.69
1899	2,882,570,430	90,249,320 "	7,897,453	247,258 "	87.16
1900	2,651,277,240	231,293,190 decrease	7,263,773	633,680 decrease	78.69
1901	2,785,156,440	133,879,200 increase	7,630,566	366,793 increase	80.87
1902	2,930,553,545	145,397,105 "	8,028,914	398,348 "	85.27

COMPARATIVE STATEMENT OF DOMESTIC PUMPING DURING THE PAST TEN YEARS.

Date.	Domestic Yearly Pumping.	Increase or Decrease.	Average Daily Pumping.	Increase or Decrease	Gallons to each inhabitant daily.
1893	1,668,235,574	241,835,439 increase	4,570,509	673,241 increase	55.61
1894	1,547,943,977	120,291,597 decrease	4,240,942	329,567 decrease	50.34
1895	1,530,152,817	17,791,160 "	4,192,199	48,743 "	50.04
1896	1,730,224,007	200,071,190 increase	4,727,388	535,189 increase	54.42
1897	1,740,357,346	10,133,339 "	4,768,102	40,714 "	54.50
1898	2,064,438,585	324,081,239 "	5,655,996	887,894 "	63.35
1899	2,085,998,805	21,560,220 "	5,715,070	59,074 "	63.08
1900	1,799,732,048	286,266,757 decrease	4,930,772	784,298 decrease	53.42
1901	1,875,617,660	75,885,612 increase	5,138,678	207,906 increase	54.07
1902	1,864,195,170	11,422,490 decrease	5,107,384	31,294 decrease	54.24

Total amount of coal consumed (in pounds)	4,097,200
Daily average coal consumed (in pounds)	11,233
Coal consumed per million gallons pumped (in pounds)	1,398
Highest water elevation in Fresh Pond was on April 14th	17.24
Lowest water elevation in Fresh Pond was on November 30th	13.45
Average height of water in Fresh Pond	15.17
Highest water elevation in Stony Brook Reservoir was on March 1st	83.75
Lowest water elevation in Stony Brook Reservoir was on July 8th	79
Highest water elevation in Hobbs Brook Reservoir No. 1, Lincoln Street, was March 1st	182.60
Lowest water elevation in Hobbs Brook Reservoir No. 1, Lincoln Street, was September 18th	180.10
Highest water elevation in Hobbs Brook Reservoir No. 2, Winter Street, was March 2d	182.15
Lowest water elevation in Hobbs Brook Reservoir No. 2, Winter Street, was October 1st	178.28
Total rainfall at Fresh Pond Pumping Station	43.31
Total rainfall at Stony Brook Reservoir	44.58
Total rainfall at Hobbs Brook Reservoir	42.24

TOTAL RAINFALL FOR THE PAST TEN YEARS.

Month.	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902
	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.
December	1.23	5.23	4.43	1.90	1.63	4.31	2.00	1.30	1.74	7.71
January	1.87	3.05	3.57	2.46	3.32	4.75	3.85	4.40	1.55	1.97
February	6.43	2.91	1.07	5.62	2.36	3.61	3.99	7.34	.79	4.29
March	2.50	.84	2.68	4.37	2.66	2.03	5.94	5.10	6.89	6.16
April	3.25	2.94	4.15	1.70	2.82	6.22	1.32	1.99	8.80	3.56
May	7.30	4.63	2.39	2.42	4.24	3.92	.77	5.52	6.96	1.08
June	2.18	.81	2.76	2.33	5.16	1.82	3.17	2.75	1.33	2.40
July	2.26	2.88	3.28	2.65	4.68	4.50	3.12	2.31	4.70	3.14
August	5.95	1.63	4.71	2.45	5.06	7.34	3.21	2.80	4.17	3.62
September	1.76	2.40	1.83	6.29	3.22	1.78	4.63	4.40	3.74	3.36
October	3.77	5.19	10.16	3.10	.55	7.22	3.08	3.75	2.86	4.65
November	1.99	3.34	6.09	3.53	6.83	4.92	2.20	5.23	2.67	2.37
Total	40.49	35.85	47.12	38.82	42.53	52.42	37.28	46.89	46.20	43.31

FRESH POND AND SURROUNDINGS.

The condition of the grounds, roads and walks about the Pond has been maintained as in past years; the care and propagation of plants and shrubs in the nursery has been continued.

The sale of plants this season has amounted to $533.41; in addition to these a great quantity of shrubs, etc., has been used on the sections graded this year.

The appropriation of $10,000.00 made for the park work about the Pond has been expended in continuing the grading on the the north and northwest sides of Concord and Huron Avenues. Work was begun September 2nd and continued until November 15th. This portion of the border of the Pond is now nearly completed, and with a few years' growth of the shrubbery it will form a very attractive section of the park system.

As in past years all standing grass not needed by the department has been sold.

The average height of the Pond has been 15.17 or .52 lower than last year; but in comparing these elevations the fact should be taken into consideration that the rainfall this year has been 2.89 less than that of last year.

A catch basin has been built on Huron Avenue near Concord Avenue.

FRESH POND RESERVOIR.

Date.	Lowest Elevation During Month.	Highest Elevation During Month.	Monthly Rainfall, Inches.	Intake Gate.			
				8-inch Opening.		30-inch Opening.	
				Opened.	Closed.	Opened.	Closed.
1901							
December 1.	14.66	.....	.....	During entire		During entire	
December 31.	.....	15.54	.....	month, 28 turns		month, 30 in.	
December....	.....	.....	7.71				
1902							
January 2.	.....	15.59	.....	During entire		During entire	
January 19.	15.29	.....	.....	month, 28 turns		month, 30 in.	
January.....	.....	.....	1.97				
February 16.	15.17	.....	.....	During entire		During entire	
February 27.	.....	15.66	.....	month, 28 turns		month, 30 in.	
February.....	.....	.....	4.29				
March 1.	15.86	.....	.....	During entire		During entire	
March 31.	.....	16.92	.....	month, 28 turns		month, 30 in.	
March.....	.....	.....	6.16				
April 14.	.....	17.24	.....	During entire month, 28 turns		April 1 to 13, 30 in.	April 14
April 30.	16.75	.....	.....			April 25 to 30, 30 in.	
April.....	.....	.....	3.56				
May 1.	.....	16.97	.....	During entire		During entire	
May 24.	16.31	.....	.....	month, 28 turns		month, 30 in.	
May	.....	.....	1.08				
June 1.	.....	16.48	.....	During entire		During entire	
June 29.	15.09	.....	.....	month, 28 turns		month, 30 in.	
June.....	.....	.....	2.40				
July 1.	.....	15.16	.....	During entire		During entire	
July 20.	14.52	.....	.....	month, 28 turns		month, 30 in.	
July.....	.....	.....	3.14				
August 4.	.....	14.52	.....	During entire		During entire	
August 31.	14.13	.....	.....	month, 28 turns		month, 30 in.	
August.....	.....	.....	3.62				
September 2.	.....	14.30	.....	During entire		During entire	
September 27.	13.76	.....	.....	month, 28 turns		month, 30 in.	
September....	.....	.....	3.36				
October 6.	.....	13.96	.....	During entire		During entire	
October 26.	13.50	.....	.....	month, 28 turns		month, 30 in.	
October.....	.....	.....	4.65				
November 3.	.....	13.78	.....	During entire	Nov. 24 from 7.15 a.m. to 8.30 a.m.	During entire	
November 30.	13.45	.....	.....	month, 28 turns		month, 30 in.	
November.....	.....	.....	1.37				

PUMPING STATION AND GROUNDS.

The engines and boilers are reported by the Chief Engineer to be in first-class condition, the new Engine No. 7 having done substantially all the work the past year.

The grounds about the station have received the usual care and attention.

The cornice of the pumping station should be painted the coming year and the conductors and gutters should be repaired.

PAYSON PARK RESERVOIR.

The south basin of the reservoir was cleaned out the early part of the season and the fence has been scraped and painted.

The grounds and buildings are in good condition.

No material change has occurred in the leakage from these basins.

PIPE YARD.

The woodwork of the shop and stable has been painted and a new fence has been built in front and alongside of the dwelling house.

The fence along Auburn Street has been repaired.

The dwelling house and sheds should be painted the coming year.

HIGH SERVICE.

Following is the list of streets supplied from the high service: —

Agassiz Street.
Appleton Street, from Highland Street to beyond Hutchinson Street.
Arlington Street.
Avon Hill Street.
Bates Street.
Bellevue Avenue.
Bellevue Avenue, west.
Buena Vista Park.
Concord Avenue, from Huron Avenue to Buckingham Street.
Garden Street, from Huron Avenue to Linnaean Street.
Highland Street, from Reservoir Street to Appleton Street.
Hillside Avenue.
Holly Avenue.
Humboldt Street.
Huron Avenue, from Appleton Street to Raymond Street.
Lancaster Street.
Linnaean Street.
Mount Pleasant Street.
Raymond Street, from Linnaean Street to Walden Street.
Reservoir Street, from Highland Street.
Upland Road, from Richdale Avenue to Huron Avenue.
Vassal Lane, from Huron Avenue.
Vincent Street.
Walnut Avenue.
Washington Avenue.

LIST OF CHECK VALVES IN USE.

Appleton Street at Hutchinson Street.
Avon Hill Street and Linnaean Street.
Concord Avenue at Buckingham Street.
Garden Street and Linnaean Street.
Raymond Street and Linnaean Street.
Upland Road near Mt. Vernon Street.
Vincent Street at Walden Street.

LEAKAGE.

Twenty-three hundred thirty-nine (2,339) leaks have been reported and repaired this year; they were discovered as follows: —

Ninety-six (96) on supplies in street.
One (1) on forty-inch check valve at Pumping Station.
One (1) on thirty-inch Stony Brook main in Holworthy Street.

One (1) on twenty-four inch main (pumping main) Lake View Avenue.
One (1) on twenty-inch main in Craigie Square.
One (1) on ten-inch main.
Ten (10) on six-inch mains.
Five (5) on four-inch mains.
One (1) on siphon in Third Street.
Five (5) on hydrants.
Two (2) on hydrant supplies.
Two (2) on fountains.
Five (5) on street watering standpipes.
One (1) on fire supply.
Five (5) on gates.
Twenty-two hundred two (2,202) on premises.

Of the foregoing leaks on premises twenty-one hundred ninety-five (2,195) have been reported by our inspectors; they were discovered by them while on the annual canvass and reported as follows: —

Sixteen hundred ninety-five (1,695) on water closets.
Four hundred thirty-nine (439) on faucets.
Twenty-six (26) on pipes.
Three (3) on sill cocks.
Twelve (12) on stop and wastes.
Twenty (20) on tanks.

Thirteen (13) leaks on supplies in street have been caused by electrolytic action on the pipe; the cost of repairs has as usual been charged to the Boston Elevated Railway Company.

TABLE SHOWING A GAIN OR LOSS IN THE TOTAL CONSUMPTION FOR THE YEAR 1902 OVER THE YEAR 1901.

	Total Consumption 1901.	Total Consumption 1902.	Increase or Decrease, + or —.
December	220,410,520	255,777,480	35,366,960+
January	239,847,080	269,265,480	29,418,400+
February	235,592,720	236,038,880	446,160+
March	222,808,960	231,112,200	8,303,240+
April	208,326,800	222,932,065	14,605,265+
May	207,740,720	240,431,400	32,690,680+
June	236,636,840	273,874,920	37,238,080+
July	255,524,280	256,684,120	1,159,840+
August	246,125,000	242,271,360	3,853,640—
September	231,464,200	232,555,840	1,091,640+
October	250,991,840	244,691,040	6,300,800—
November	229,687,480	224,918,760	4,768,720—
Total	2,785,156,440	2,930,553,545	145,397,105+

MAIN PIPE.

Ten thousand three hundred thirty-one and one-half (10,331½) feet of cast iron main pipe have been laid during the year; of this amount four thousand three hundred ninety (4,390) feet were used on extension in new locations and five thousand nine hundred forty-one and one-half (5,941½) feet were used in renewing pipe that had been in use for years and inadequately supplied the vicinity wherein located. The sizes were from four-inch to twelve-inch.

In Burns Court from Bradbury Street to Foster Street a new four-inch main has been laid to replace the old three-inch laid in 1868.

The construction of the sewer in Cambridge Street from Inman Square to Baldwin Street made it necessary to lay a new pipe to take the place of the old ten-inch pipe, laid in 1867, located on the north side of the street. Two thousand twenty-three (2,023) feet of twelve-inch and one hundred sixty-one (161) feet of ten-inch pipe were laid and connected to the twenty-four inch on the south side of Cambridge Street and also to all the cross streets. The location given for this pipe was the same as that occupied by the old twenty-inch cement pipe which it became necessary to remove before laying the new pipe. This made the expense of laying more than usual, but the old iron from the cement pipe was sold for $291.58 on the street. The total cost of pipe, gates and connections, and the laying of same, was $6,194.23.

In Charles Street from Sixth Street, west, ninety-six (96) feet of six-inch pipe has been laid to take the place of the old six-inch laid in 1891.

In Cogswell Place from Cogswell Avenue to Mead Street the old three-inch, laid in 1871 and 1872, has been discontinued and five hundred twenty-six (526) feet of four-inch laid in its place.

East Street from North Street to beyond Leighton Court is supplied by a new six-inch main two hundred nine (209) feet long; this locality was formerly cared for by a four-inch pipe which was laid in 1867.

The old four-inch in Hilliard Street from Brattle Street to Mount Auburn Street, laid in 1868 and 1869, has been removed; this district is now supplied by five hundred seventy-seven (577) feet of six-inch pipe.

Eighteen hundred fifty-seven and one-half (1857½) feet of six-inch has been laid in Mount Vernon Street from Massachusetts Avenue to Upland Road; the old four-inch pipe in this street has been discontinued, having been in use since 1868 and 1882.

In Oxford Street from Garfield Street to Beacon Street eight hundred seventy-six (876) feet of eight-inch pipe has been laid to take the place of the old eight-inch and six-inch pipes laid in 1870.

The table following will be found to contain the list of streets wherein pipes were extended and renewed.

In Erie Street from Bell Court to Waverly Street the six-inch main has been raised.

In Bell Street from Erie Street the four-inch main has been shut off and a small pipe laid to supply the building which is located over our four-inch main.

The twelve-inch main in Cambridge Street and the six-inch mains connecting the intersecting streets have been chained up during the construction of the new sewer.

The main pipe also in Sparks Street has been chained up at the request of the Sewer Department, which has built a new sewer in this street.

The annual inspection of the main pipes was made as usual this year under Assistant Superintendent Parker's supervision. It was carried on at night with results as satisfactory as in former years.

In response to the many requests of the consumers in various parts of the City the water has been blown off in the main pipes in the locations specified; this was done in addition to the foregoing general inspection made by the Assistant Superintendent.

Two (2) new blow-off cocks have been placed in Saint Paul Street.

On March 8th a schooner while coming through the draw at Third Street bridge grounded and as the tide went out settled on the twelve-inch pipe and broke it. The water has been shut off on each side since that date and I would recommend that the siphon at Brookline Street bridge, which is not in use, be moved to Third Street. This would give us at that point a perfectly safe siphon under all possible conditions of traffic.

MAIN PIPE LAID, NUMBERS OF GATES AND FIRE HYDRANTS.

	Iron Pipe.		Gates.	Hydrants.
	Feet.	Size.	Size.	Kind.
		inch.	inch.	
Allston street, at Sidney street, east	.....	.....	6	.....
" " " " west	.....	.....	6	.....
" " " " "	4	6	.....	Chapman.
Appleton street, opposite Brewster street	7	6	.....	Chapman.
" " " " "	2	10	.....	.....
Baldwin street, connection at Cambridge street	14	6	.....	.....
" " corner Emmons place	.....	.....	.....	Flush.
Banks street, corner Flagg street	.....	.....	.....	Chapman.
Brattle street, between Channing and Lowell streets	7	6	.....	Chapman.
" " at Story street	.....	.....	.....	Chapman.
Brewster street, near Riedesel avenue	4	6	.....	Chapman.
Burns court, from Bradbury to Foster streets	233	4	.....	.....
" " at Bradbury street	.....	.....	4	.....
Cambridge street, at Baldwin street, north	.....	.....	10	.....
" st, from beyond Baldwin to Ellery street	161	10	.....	.....
" st., at Fayette st. (cross connection)	16	6	.....	.....
" street, opposite Fayette street	.....	...	.....	Chapman.
" st, from Inman square to Ellery street	2,023½	12	.....	.....

MAIN PIPE LAID, NUMBER OF GATES AND FIRE HYDRANTS.—*Continued.*

	Iron Pipe.		Gates.	Hydrants.
	Feet.	Size.	Size.	Kind.
		inch.	inch.	
Cambridge street, at Leonard avenue, north			12	
" " " " " on hydrant	18	6		
" st., at Maple avenue (cross connection)	20	6		
" " " " north			12	
" " between Maple and Highland avenues	7	6		Chapman.
Camelia avenue, connection at Cambridge street	14	6		
Charles street, from Sixth street	96	6		
Chestnut street, extension toward Waverly street	54	4		
Cogswell place, from Mead st. to Cogswell ave	526	6		
" avenue, at Mead street			6	
Columbia street, at Harvard street	7	6		Chapman.
Cottage Park avenue	84	4		
East street from North street to Leighton court	209	6		
Ellsworth avenue at Cambridge street	53	6		
Erie street, at Bell street			6	
" " from Bell to Sidney streets	390	6		
" " at corner Brookline street				Flush.
" " at Sidney street			6	
Fayerweather street, toward Vassal lane	258	8		
First street, corner Bent street	3in.	12		Chapman.
" " " " "	9	6		
" " " Rogers street	3	12		Chapman.
" " " " "	9	6		
Forest street, at Garfield street			4	
Francis avenue, extension to Everett street	333½	4		
" " at Everett street			4	
Harris street, at Oxford street	50	6		
" " " " "			6	
" " " " "			6	
Harvard street, at Burleigh street	8½in	6		Chapman.
" " at Clark street	9½	6		Chapman.
" " at Moore street	8½	6		Chapman.
High street, at Park avenue	15	6		
Highland avenue, at Cambridge street	132	6	6	
Highland street, near Sparks street	7	6		Chapman.
Hilliard street, from Brattle to Mt. Auburn sts	577	6		
" " at Mt. Auburn street			6	
Holmes street, at Park avenue	15	6	6	
Hovey avenue, from Cambridge street	14	6	6	
Hubbard avenue, corner Walden street	7	6		Chapman.
Huron avenue, from Fayerweather street	396	8		
" " at " " "			6	
" " 361 ft. from Fayerweather street				Chapman.
" " from Park avenue	257	8		
Jackston street, corner Dudley street	9	6		Chapman.
" " " Neill court	12	6		Holyoke.
Leighton court, from East street	13	4	4	
Leonard avenue, from Cambridge street	14	6	6	
Line street, at Cambridge street	14	6		
Main street, near First street	2	6	6	
Maple avenue, from Cambridge street	55	6		
Marcella street	6	6		Holyoke.
Mass. avenue, corner Columbus avenue	12	6		Chapman.
Mt. Vernon st., from Mass. ave. to Upland road	857½	6		
Mt. Vernon street, at Mass. avenue			6	
" " " at Upland road			6	
Norfolk street, at Harvard street	9	6		Chapman.
Norman street, from Belmont street	298	4		
" " at " "			4	
Osborn street	8	6		Chapman.
Oxford street, from Beacon to Garfield streets	876	8		
" " at Harris street			8	
" " corner Harris street				Chapman.
Park avenue, at Bend	8	6		Chapman.
" " at High street	8	6		Chapman.
" " at Huron avenue	8	6		Coffin.
" " " " "			6	
" " from Huron avenue to bend	687	6		
Pleasant street, corner Fairmont street	6	6		Chapman.
" " " " "	6	12	12	
" " " Warland street	6	6		Chapman.

MAIN PIPE LAID, NUMBER OF GATES AND FIRE HYDRANTS.—*Concluded.*

	Iron Pipe.		Gates.	Hydrants.
	Feet.	Size.	Size.	Kind.
		inch	inch.	
Portland street, corner Main street	.....	.....	.....	Chapman.
Putnam avenue, corner Sands street	.....	.....	.....	Chapman.
Royal avenue, at Huron avenue	22	6	6	Chapman.
" " from Huron avenue	183½	6	.....	.....
Sidney street, at Allston street	.....	.....	.....	Chapman.
" " at Erie street	7	6	.....	Chapman.
" " " " "	.....	.....	12	.....
" st., from Erie street to Putnam avenue	808	12	.....	.....
" street at Putnam avenue	.....	.....	12	.....
Sixth street, corner Gore street	2	8	.....	.....
" " " " "	5	6	.....	Boston.
Somerset street, at Pleasant street	20	6	.....	Chapman.
South street, corner Dunster street	.....	.....	.....	Chapman.
Sparks st., between Highland st. and Huron ave	9	6	.....	Chapman.
Spruce avenue from Cushing street	139	4	.....	.....
" " at " "	.....	.....	4	.....
Tannery street	.....	....	.....	Perkins.
Waverly st., from Erie st. to connect to 16 in	153	6	.....	.....
Yorktown street	9	6	.....	Holyoke.

The sizes, lengths and weights of cast iron pipe laid are as follows :—

Size.	Length in Feet.	Weight in Tons.
12-inch	2,483½	110.44
10-inch	163	5.75
8-inch	1,789	38.34
6-inch	4,381½	62.59
4-inch	1,154¼	9.79

SUPPLIES.

There have been one hundred sixty-one (161) supplies laid this year in new locations, making the total number laid to date, fourteen thousand five hundred and sixty-nine (14,569).

The account of the number and sizes of new supplies will be found in recapitulation table on page 50.

Four-inch supplies have been laid for Charles Wetmore on Bow Street and for Harvard College, Pierce Hall, on Oxford Street; and the Boston & Maine Railroad has required two large supplies ; one of four-inch pipe in Sherman Street and one of six-inch pipe in East Street.

In addition to the foregoing large supplies we have laid eight (8) fire supplies as follows : A four-inch for George F. Blake Manf'g Co. on Binney Street; a six-inch for Cambridge Electric Light Company on Western Avenue; a six-inch for the Cambridge Observatory, Harvard College ; a six-inch for Little, Brown & Co. on Putnan Avenue ; a six-inch

for the National Biscuit Company on Franklin Street; two two-inch for P. G. Rice & Co. on Massachusetts Avenue and Lee Street; and one four-inch for University Associates on Massachusetts Avenue. Nine (9) supplies have been laid at the request and for the Sewer Department while constructing its sewers in several streets; as these were temporary supplies and have been removed, they were not included in the foregoing number.

Fifty-one (51) supplies have been furnished with sidewalk shut off boxes.

One hundred sixty-seven (167) supplies have been renewed as follows:

As the main pipes were renewed in the following named streets the supplies were renewed where necessary; five (5) in Burns Court; one (1) in Cambridge Street; seven (7) in Cogswell Place; five (5) in East Street; eight (8) in Hilliard Street; (8) in Mt. Vernon Street; and (9) in Oxford Street. Fourteen (14) supplies have been renewed in River Street. As this street was to be paved to Kinnaird Street the service pipes were examined and in the above stated places were renewed in order that the surface of the street need not be disturbed for several years.

One hundred ten (110) supplies were renewed at the request of owners of premises.

Since the introduction of Stony Brook water the supply pipes throughout the City have filled up much more rapidly than before the connection to this source of supply, and I think that the trouble comes from the much softer water. As this trouble causes a large expense for the renewal of the supplies, and also the objectionable digging up of the streets, I would ask that something better than galvanized pipes be considered for supply pipes. I am aware that the first cost will be more, but the expense for a term of years will certainly be less, and we will not have the digging up of the streets for the purpose of renewing supplies.

Following is the list of establishments having fire protection from the City of Cambridge: —

American Rubber Co.,	Binney street,	Two 6-in.
American Net & Twine Co.,	Third street,	6-in.
American Vulcanized Rubber Co.,	Tannery street,	2-in.
Barber Asphalt Paving Co.,	First street,	6-in.
Bay State Metal Works,	Harvard street,	6-in.
Blacker & Shepard,	Osborn street,	2-in.
Blake, Geo. F., Manufacturing Co.,	Binney street,	8-in.
" " " "	Third street,	4-in.
Boston Book Binding Co.,	Mt. Auburn street,	6-in. & 4-in.
Boston Elevated Railway Co.,	Baldwin street,	2-in. & 4-in.
" " " "	Cambridge street,	Two 2-in.
" " " "	Pelham street,	Three 4-in.
" " " "	Massachusetts avenue,	4-in.

Boston Elevated Railway Co.,	Mt. Auburn street,	4-in. & 2 in.
" " " "	Murray street,	4-in.
" " " "	River street,	4-in.
Boston & Maine Railroad,	Bridge street,	4-in.
" " "	Bridge street,	6-in.
" " "	Prison Point street,	4-in.
Boston Woven Hose & Rubber Co.,	Portland street,	10-in. & 8-in.
Cambridge Gas Co.,	Third street,	6-in.
Cambridge Electric Light Co.,	Western avenue,	6-in.
Cambridge Mutual Fire Insurance Co.,	Massachusetts avenue,	2-in.
Chelmsford Foundry Co.,	Portland street,	2-in.
Dover Stamping Co.,	Pleasant street,	6-in.
Fogarty & Daly,	Massachusetts avenue,	4-in.
Ginn & Co.,	First street,	Two 6-in.
" "	Athenaeum street,	8-in.
Goepper Brothers,	Ninth street,	1 1-2-in.
Harvard College,	Harvard Union, Harvard st.,	4-in.
" "	Memorial Hall, Cambridge st.,	4-in.
" "	Observatory, Concord avenue,	6-in.
" "	Semitic Mus'm, Divinity ave.,	4-in.
Holy Ghost Hospital for Incurables,	Hovey avenue,	3-in.
Houghton, Mifflin & Co.,	Albro & Blackstone streets,	6-in.
" " "	River street,	6-in.
Irving & Casson,	Otis street,	6-in.
" "	Thorndike street,	6-in.
" "	Thorndike street,	2-in.
Ivers & Pond Piano Co.,	Albany street,	4-in.
Jones & Co., C. L.,	Pearl street,	4-in.
Keeler & Co.,	Thorndike street,	1-in.
Kendall, Edward, & Sons,	Main street,	2-in.
Lamb & Ritchie,	Albany street,	6-in.
Lever Bros. Limited (Boston Works),	Broadway,	6-in.
Little, Brown & Co.,	Putnam avenue,	6-in.
Lockhart, Wm. L., & Co.,	Bridge street,	1 1-2-in.
Luke, E. H., Estate of,	Main street,	2-in.
Mason & Hamlin Co.,	Broadway,	Two 6-in.
Massachusetts Athletic Ass'n,	Lansdowne street,	4-in.
Metropolitan Storage Warehouse Co.,	Massachusetts avenue,	6-in.
Middlesex C'ty, House of Correction,	Second & Spring streets,	6-in.
National Biscuit Co.,	Franklin street,	4-in.
" " "	Franklin street,	6-in.
" " "	Green street,	8-in.
National Linseed Oil Co.,	Fifth street,	6-in.
North Packing & Provision Co.,	Winsor street,	6-in.
O'Brien, John (Rev.),	Seventh street,	4-in.
Page, Geo. G., Box Co.,	Hampshire street,	6-in. & 4-in.
Petterson, Oscar G.,	483 Main street,	4-in.
Pierce, Thomas, Trustees of Est.,	Broadway,	6-in. & 4-in.
Pi Eta Club,	Winthrop street,	2-in.
Porter, Henry S.,	Kinnaird street,	4-in.
Reardon, John, & Sons, Corporation,	Waverly street,	4-in.
Reardon, William,	Portland street,	2-in.
Revere Sugar Refinery,	Water street,	6-in.
Reversible Collar Co.,	Putnam avenue,	6-in.
Russell, Lucy J.,	29 Elm street,	1 1-2-in.
Rice, P. G., & Co.,	Massachusetts ave. & Lee st.,	Two 2-in.

Sawyer, Howard M., & Son,	Thorndike street,	4-in.
Seavey Manufacturing Co.,	Third street,	6-in.
Seelye Manufacturing Co.,	First street,	4-in.
Simplex Electrical Co.,	Auburn street,	3-in.
" " "	Auburn street,	6-in.
" " "	Franklin street,	6-in.
Slavens, Luther R.,	Broadway,	2-in.
Sparrow, H. F., & Co.,	Hampshire street,	6-in.
Speare's, Alden, Sons & Co.,	Rogers street,	4-in.
" " " "	Sixth street,	4-in.
Standard Oil Co.,	Potter street,	6-in.
Standard Turning Works,	Main street,	2-in.
Thayer, Henry, & Co.,	Broadway,	6-in.
Tower, Sylvester, & Son,	Broadway,	4-in.
University Associates,	Linden street,	4-in.
" "	Massachusetts avenue,	6-in.
University Press,	Nutting place,	6-in.
Wetmore, C. D.,	Claverly Hall, Mt. Auburn st.,	4-in.
Whittemore Brothers,	Albany street,	4-in.

DRINKING FOUNTAINS.

There has been no addition this year to the number of drinking fountains; there are twenty-eight (28) in use, of which four (4) are ice water drinking fountains.

The icewater drinking fountains were supplied with ice from June 14 to September 30, inclusive, at a cost of four hundred sixty-one and 47-100 dollars ($461.47), as follows: Central Square fountain, $119.70; East Cambridge fountain, $153.00; Harvard Square fountain, $90.15; North Cambridge fountain $98.62. An appropriation of five hundred dollars ($500.00) was made by the City Council for this expenditure.

The fountains have been inspected and repaired as usual. Following is a list of those which have received more extended repairs: Brattle Square, Cambridge Field, Central Square, Inman Square, Kendall Square, Porter's Square, Rindge Field, Sherman Square.

STREET WATERING STANDPIPES.

At this date (December 1, 1902) there are sixty-one (61) street watering standpipes in use.

Two have been added to the list this year as follows:—

On Kirkland Street, corner of Trowbridge Street, and on Rindge Avenue, corner of Clifton Street; this standpipe was situated previous to this location on Lake View Avenue, but was not included in the list as it was not used for street sprinkling purposes.

The standpipe located at corner of Austin and School Streets has we hope found its final resting place at the corner of Winsor and State

Streets; it has been relocated several times but has always been a source of annoyance to its neighbors.

At the corner of Broadway and Sixth Street a new standpipe has been set to replace one that was broken.

In the following named streets the standpipes have been repaired: Brattle Square; Beach Street at Massachusetts Avenue; Bend Street at Garden Street; Central Square; Massachusetts Avenue at Frank Street; Massachusetts Avenue at Hancock Street; Thorndike and Sixth Streets; River Street near Putnam Avenue; Waterhouse and Garden Streets; Winsor Street at Broadway; Winsor Street at Cambridge Street.

The Street Department has as in previous years reimbursed this department for the expense incurred in repairing the standpipes injured by frost.

GATES.

Thirty-nine (39) gates have been set this year. (See lists on page 50).

Fifteen (15) on extension of main pipes.

Fifteen (15) on renewal of main pipe.

Nine (9) on supplies.

The usual thorough examination of gates has been made, and their situation carefully located.

At Cambridge Street, corner of First Street, the gate has been raised.

In Prison Point Street one (1) eight-inch and one (1) one six-inch gates have been set to take the places of old ones. This work was done at the request of the Boston & Maine Railroad Company, and the cost of same has been charged to it.

BOXES.

The total number of boxes set during the year was one hundred eight (108).

Thirty-one (31) iron boxes have been set on extension and renewal work.

Thirty-one (31) special meter boxes have been set with meters.

Twenty-three (23) iron boxes have been set on new supplies.

Twenty-three (23) boxes have been set in place of worthless ones removed as follows: eighteen (18) iron; two (2) wooden; two (2) flush; and one (1) meter boxes.

In ten (10) locations the boxes have been lowered.

In nineteen (19) locations the boxes have been raised.

In seven (7) locations the boxes have been repaired, and

In one (1) location a gate box has been reset.

Outside of the usual examination of service boxes and the lowering or raising of same to sidewalk level, in one hundred ten (110) cases the service boxes have been lowered and in twenty-one (21) they have been raised; in two (2) cases they have been repaired.

In Wright Street, on account of the widening of the street by the Street Department, the service boxes have been relocated; and on supplies not previously furnished new service boxes have been set.

HYDRANTS.

There are one thousand one (1,001) hydrants in use at this date (December 1, 1902).

Two (2) flush and forty (40) posts, one (1) Boston, thirty-four (34) Chapman, (1) Coffin, three (3) Holyoke, and one (1) Perkins, have been set this year. (See table of Main Pipe Laid, etc., on page 50).

Six (6) posts and thirteen (13) flush have been removed as follows:

Chapman post from Banks Street, corner of Flagg Street; Holyoke post from Brattle Street, corner of Story Street (this hydrant was broken by a team); Boston post from Putnum Avenue, corner of Sands Street; Boston post from Portland Street, corner of Main Street; Perkins post from South Street, corner of Dunster Street; Perkins post from Tannery Street (this hydrant was broken by a team); and flush hydrants have been removed from Allston Street, corner of Sidney Street; Baldwin Street, corner of Emmons Place; Cambridge Street, opposite Fayette Street; Cambridge Street, opposite Maple Avenue; Columbia Street, corner of Harvard Street; Erie Street, corner of Brookline Street; Harris Street, corner of Oxford Street; Harvard Street, corner of Clark Street; Harvard Street, corner of Moore Street; Hubbard Avenue, corner of Walden Street; Norfolk Street, corner of Harvard Street; Somersett Street, corner of Pleasant Street; Sixth Street, corner of Gore Street.

Total number and kinds of hydrants in use are as follows:—

Boston	156
Chapman	514
Coffin	42
Flush	108
Holyoke	88
Perkins	93
Total	1,001

The grades of hydrants in the following streets have been changed to conform to the surface elevation: Boylston Street opposite Eliot Street; Bridge Street; Dana Street between Broadway and Cambridge Street;

Lake View Avenue at No. 107; Mount Auburn Street at Channing Street; Mount Auburn Street at Elmwood Avenue; Quincy Square; Sherman Street; Washington Avenue near Upland Road.

In the locations following the hydrants have been repaired: Bow Street at Plympton Street; Burleigh Street at Hastings Street; Cambridge Cemetery; Cedar Street at Harvey Street; Columbia Street at Broadway; Crescent Avenue near Hewes' pottery; Green Street at Bay Street; Green Street at Vernon Street; Hampshire Street at Elm Street; Harvard Street at Bigelow Street; Lee Street; Market Street at Columbia Street; Mount Auburn Street at Banks Street; Mount Auburn Street at Boylston Street; Mount Auburn Street at Lowell Street; Union Street; Walker Street; Washington Avenue.

At Blanche Street, corner of Massachusetts Avenue, the Chapman hydrant has been relocated.

In Prison Point Street the hydrants have been removed and relocated temporarily during the construction of the new street. So soon as this work is completed the hydrants will be set in permanent locations.

In Franklin Street the Chapman hydrant has been relocated at the expense of and for the accommodation of the National Biscuit Company.

The annual inspection of hydrants has been made.

METERS.

Two hundred fifty-four (254) meters have been set this year in new locations, as follows: Three (3) were set on police stations; thirty-six (36) were set on schoolhouses; sixteen (16) were set on churches; eight (8) were set on engine houses in various parts of the City; the remaining number, one hundred ninety-one (191) were set at the request of the property owners, or where in the judgment of the Water Board they were necessary, in order to prevent waste of water.

The sizes were as follows: One hundred twenty-seven (127) of five-eighths inch; sixty-seven (67) of three-fourths inch; forty-five (45) of one inch; eight (8) of one and one-half inch; four (4) of two inches; one (1) of three inches; one (1) of four inches; one (1) of six inches.

The number of meters now in use in the City is: —

3	Ball & Fitts	9	Thompson
41	Crown	684	Trident
2	Empire	54	Union Rotary
1	Gem	1	Weir
1,169	Hersey	72	Worthington
64	Lambert		
13	Nash	2,113	

STONY BROOK PIPE LINE.

The usual inspection of all the gates and air valves has been made the past year. The work of examining the line for leaks was continued this year with the result that in that portion of the line through Holworthy Street and Mount Auburn Street as far as Cottage Street in Watertown nearly every joint uncovered was found in a leaky condition.

Owing to a change in grade of Pleasant Street in Watertown a portion of this main will have to be lowered the coming season. Work is now is progress on a portion west of Moody Street in Waltham where the pipe was laid on filling and has settled.

The ejector placed on the summit of the main in Holworthy Street for the purpose of removing the air has been in operation during the whole of the year with, I think, very satisfactory results in the discharge from this line.

STONY BROOK.

Two cesspools and one vault have been constructed the past year to care for drainage on the water-shed of this brook, making a total of eighteen cesspools and nineteen vaults.

All cleaning of the same has been done by our outfit, it only being necessary to hire a double team when needed. The practice shows a material saving over previous years.

HOBBS BROOK.

The twelve-inch drain which was under construction at the date of the last report has been finished, and has removed all standing water from that portion of the filled land near Winter Street.

The condition of the meadows last winter being favorable, about fifteen thousand four hundred fifty (15,450) feet of ditching was done on the land about the upper portion of this basin. The ditches have been cleaned of all obstructions this fall, and are in good condition.

The usual cleaning up along the line of fences has been done, and all grass not needed has been sold standing.

RECAPITULATION.

	8 Inch	6 Inch	4 Inch	3 Inch	2 Inch	1½ Inch	1¼ Inch	1 Inch	¾ Inch	Total
Length, in feet, of pipe	24	183	191½	4	404½	126½	519½	1,477	3,905½	6,835½
Number of supplies	.....	5	5	.....	12	3	8	28	100	161
Number of stop and waste valves	.....	.....	.....	.....	11	4	6	25	94	140
Number of screw cocks	.....	.....	.....	.....	12	1	10	26	101	150
Number of sidewalk cocks	.....	.....	.....	.....	1	.....	8	27	105	141
Number of service boxes	.....	.....	.....	.....	.....	.....	.....	.....	.....	134
Number of gates	.....	5	3	1	.....	.....	.....	.....	.....	9
Number of gate boxes	.....	.....	.....	.....	.....	.....	.....	.....	.....	23

MAIN PIPE.

	12 Inch	10 Inch	8 Inch	6 Inch	4 Inch	Total
Length, in feet, of pipe extension	820	2	911	1,748½	908½	4,392
Length, in feet, of pipe renewals	2,023½	161	878	2,633	246	5,941½
Total length, in feet, of pipe	2,843½	163	1,789	4,381½	1,154½	10,333½
Number of gates	5	1	1	18	6	31
Number of hydrants	.....	.....	.....	42	.....	42

TABLE SHOWING THE DAILY AVERAGE GALLONS, BY THE MONTH, FLOWING OVER THE WASTE WAY AT STONY BROOK.

	Gallons.	Number of Days.		Gallons.	Number of Days.
December, 1901	735,900,000	23	June, 1902	100,000	1
January, 1902	905,000,000	31	July, 1902		
February, 1902	494,200,000	28	August, 1902		
March, 1902	2,798,700,000	31	September, 1902		
April, 1902	1,257,800,000	30	October, 1902	18,700,000	3
May, 1902	321,700,000	31	November, 1902	7,000,000	4

Total amount wasted . . . . . 6,539,100,000 gallons.

Total number of days in which water wasted 182

STONY BROOK.				HOBBS BROOK.							REMARKS.			
				LINCOLN STREET BASIN.			WINTER STREET BASIN.							
Date.	Lowest elevation during month.	Highest elevation during month	Rainfall.	Date.	Lowest elevation during month	Highest elevation during month.	Date.	Lowest elevation during month.	Highest elevation during month.	Rainfall.	Gates Opened.	Gates Closed.	Flashboards removed.	Flashboards set.
Dec. 31, 1901	.....	82.42	.....	Dec. 30, 1901	.....	181.85	Dec. 31, 1901	.....	181.75	.....	.....	.....	.....	.....
Dec. 10, 1901	80.75	.....	7.38	Dec. 1, 1901	180.60	.....	Dec. 1, 1901	179.25	.....	8.15	.....	.....	.....	.....
Jan. 1, 1902	.....	81.94	.....	Jan. 1, 1902	.....	181.75	Jan. 1, 1902	.....	181.70	.....	.....	.....	.....	.....
Jan. 21, 1902	81.24	.....	1.88	Jan. 17, 1902	181.35	.....	Jan. 20, 1902	181.33	.....	1.62	.....	.....	.....	.....
Feb. 28, 1902	.....	82.27	.....	Feb. 28, 1902	.....	181.75	Feb. 28, 1902	.....	181.70	.....	.....	.....	.....	.....
Feb. 16, 1902	81.10	.....	4.12	Feb. 15, 1902	181.28	.....	Feb. 15, 1902	181.25	.....	3.	.....	.....	.....	.....
Mar. 1, 1902	.....	83.75	.....	Mar. 1, 1902	.....	182.60	Mar. 2, 1902	.....	182.15	.....	.....	.....	.....	.....
Mar. 28, 1902	81.52	.....	6.38	Mar. 25, 1902	181.45	.....	Mar. 25, 1902	181.45	.....	5.10	.....	.....	.....	.....
Apr. 10, 1902	.....	82.33	....	Apr. 9, 1902	.....	181.80	Apr. 10, 1902	.....	181.75	.....	.....	.....	.....	.....
Apr. 26, 1902	81.34	.....	3.94	Apr. 24, 1902	181.35	.....	Apr. 24, 1902	181.35	.....	3.85	.....	.....	.....	.....
May 2, 1902	.....	81.58	.....	May 1, 1902	.....	181.55	May 1, 1902	.....	181.47	.....	.....	.....	.....	.....
May 26, 1902	81.04	.....	1.30	May 31, 1902	181.20	.....	May 31, 1902	181.20	.....	1.62	.....	.....	.....	.....
June 1, 1902	.....	81.01	.....	June 1, 1902	.....	181.18	June 1, 1902	.....	181.18	.....	.....	.....	June 20th	.....
June 20, 1902	79.08	.....	2.32	June 30, 1902	180.85	.....	June 30, 1902	180.18	.....	2.22	.....	.....	Rem. 1st	.....
July 25, 1902	.....	80.39	.....	July 1, 1902	.....	180.85	July 1, 1902	.....	180.80	.....	.....	.....	July 3rd	.....
													Rem. 2nd	
July 8, 1902	79.	.....	3.84	July 31, 1902	180.48	.....	July 31, 1902	180.15	.....	3.12	.....	.....	July 6th	.....
													Rem. 3rd	
													July 8th	July 25th
													Rem. 4th	Set 4th
													July 29th	
													Rem. 4th	
													July 31st	
													Rem. 5th	
Aug. 13, 1902	.....	80.98	.....	Aug. 13, 1902	.....	180.55	Aug. 1, 1902	.....	180.10	.....	.....	Aug. 29	Aug. 2nd	.....
													Rem. 6th	
Aug. 4, 1902	79.33	.....	3.56	Aug. 31, 1902	180.33	.....	Aug. 21, 1902	179,25	.....	4.09	Aug. 30	.....	Aug. 4th	Aug. 12th
													Rem. 7th	Set 7th
													Aug. 18th	
													Rem. 7th	
													Aug. 23rd	
													Rem. 8th	
													Aug. 27th	
													Rem. 9th	
Sept. 5, 1902	.....	80.87	.....	Sept. 30, 1902	.....	180.45	Sept. 1, 1902	.....	179.15	.....	.....	Sept. 4	Sept. 19th	.....
													Rem. 10th	
Sept. 13, 1902	79.23	.....	4.32	Sept. 18, 1902	180.10	.....	Sept. 27, 1902	178.50	.....	4.04	Sept. 13	Sept. 18	Sept. 20th	.....
													Rem. 11th	
											Sept. 24	.....	Sept. 21st	.....
													Rem. 12th	
Oct. 30, 1902	.....	81.21	.....	Oct. 31, 1902	.....	180.75	Oct. 7, 1902	.....	178.60	.....	Oct. 10	Oct. 6	.....	.....
Oct. 10, 1902	79.77	.....	4.48	Oct. 1, 1902	180.45	.....	Oct. 27, 1902	178.28	.....	4.46	Oct. 20	Oct. 13	.....	.....
												Oct. 28	.....	.....
Nov. 1, 1902	.....	81.12	.....	Nov. 1, 1902	.....	180.75	Nov. 17, 1902	.....	178.65	.....	Nov. 17	.....	.....	.....
Nov. 17, 1902	80.02	.....	1.06	Nov. 21, 1902	180.50	.....	Nov. 30, 1902	178.45	.....	.97	.....	Nov. 27	.....	.....
Total.....			44.58							42.24				

COMPARATIVE TRENCHING FOR THE PAST TEN YEARS.

	Extensions.	Renewals.	Supplies.	Total Feet.	Miles.
1893	18,380½	11,008	14,233½	43,622	8.26
1894	13,673	17,481½	17,211	48,365½	9.16
1895	11,083	15,638½	22,266	48,987½	9.27
1896	17,621	26,043	17,361	61,025	11.55
1897	11,268	36,967½	16,121½	64,357	12.19
1898	11,045½	25,397	12,186	48,628½	9.21
1899	11,051½	9,427½	13,486½	33,965½	6.43
1900	9,174	412½	6,848	16,434½	3.11
1901	4,126	5,750	8,246	18,122	3.43
1902	4,392	5,941½	6,835½	17,169	3 25

Accompanying this will be found the report of the Chief Engineer of the Pumping Station.

All of which is respectfully submitted,

E. C. BROOKS,
Superintendent.

REPORT OF THE PUMPING ENGINEER

PUMPING STATION, CAMBRIDGE, MASS.,
December 1, 1902.

Mr. EDWIN C. BROOKS, *Supt.*

DEAR SIR: — I would report the machinery and boilers at the pumping station in first-class condition.

The Leavitt Engine No. 7, continues to run very satisfactorily, pumping 99 per cent. of all the water used by the City the past year, at very slight expense for repairs.

The coal used the last half of the year has been very inferior in quality, and has considerably reduced the average duty for the year.

Respectfully submitted,

E. I. HARRIS.

OPERATING EXPENSES AT PUMPING STATION.

Coal	$7,876.31
Express	8.75
Ice	15.30
Oil, grease and packing	429.30
Repairs on engines	135.33
Repairs on boilers	93.40
Repairs on buildings	127.11
Telephone	75.62
Tools and hardware	69.88
Miscellaneous	65.28
Salaries	7,303.72
	$16,200.00

ENGINE RECORD, POND LEVELS AND RAINFALL.

	Low Service Engines.						High Service Engine.			Engine No. 7.			Total Water Pumped.	Daily Average Water Pumped.	Total Coal Consumed.	Daily Average Coal Consumed.	Average Height of Pond.	Rainfall.
	Engine No. 1.			Engine No. 2.														
	Running Time.		Water Pumped.	Running Time.		Water Pumped.	Running Time.		Water Pumped.	Running Time.		Water Pumped.						
1901.	Hrs.	Min.	Gallons.	Hrs.	Min.	Gallons.	Hrs.	Min.	Gallons.	Hrs.	Min.	Gallons.	Gallons.	Gallons.	Lbs.	Lbs.	Feet.	Ins.
December.										308	45	255,777,480	255,777,480	8,250,887	356,150	11,489	14.99	7.71
1902.																		
January...										324	45	269,265,480	269,265,480	8,685,983	376,500	12,145	15.44	1.97
February..										293	45	236,038,880	236,038,880	8,429,960	342,500	12,232	15 39	4.29
March.....										299	15	231,112,200	231,112,200	7,455,232	336,500	10,855	16 44	6.16
April.....	41	30	12,197,400	29	30	8,445,600	101	—	6,129,585	249	30	196,159,480	222,932,065	7,431,069	351,600	11,720	16.95	3.56
May.....										313	30	240,431,400	240,431,400	7,755,851	326,800	10,542	16.65	1.58
June.....										325	15	273,874,920	273,874,920	9,129.164	351,700	11,723	15.69	2.40
July.....										317	30	256,684,120	256,684,120	8,280,133	339,550	10,953	14.81	3.14
August....										297	15	242,271,360	242,271,360	7,815,205	336,900	10,868	14.35	3.62
September.										358	45	232,555,840	232,555,840	7,751,861	310,500	10.350	14.01	3.36
October....										334	15	244 691,040	244,691,040	7,893,259	336,100	10,842	13.76	4.65
November.										291	15	224,918,760	224,918,760	7,497,292	332,400	11,080	13.59	1.37
Total.....	41	30	12,197,400	29	30	8,445,600	101		6,129,585	3,713	45	2,903,780,960	2,930,553,545		4,097,200			43.31
Daily av'ge														8,028,914		11,225	15.17	

REPORT OF THE SUPERINTENDENT OF STREETS

To the Honorable, the City Council:—

Gentlemen:—In accordance with the requirements of the ordinance relating to streets, (Section 4, of Chapter 25) I have the honor to submit my ninth annual report, for the financial year ending November 30, 1902.

The general arrangement of the report is somewhat different from that followed in recent years. The regular general appropriations of the department are presented in alphabetical order, after which the numerous special appropriations are treated in groups under the following headings: Granite Block Paving, Vitrified Brick Paving, Construction of Streets.

BRIDGES.

Appropriation		$3,500 00
EXPENDED.		
Draw tenders salaries	$1,824 86	
First Street Bridge:—		
Repairs	5 24	
Third Street Bridge:—		
Repairs	34 43	
Sixth Street Bridge:—		
Planking and repairs	164 36	
Walden Street Bridge:—		
Fireproof covering, new sheathing, etc.	1,360 86	
Wellington Street Bridge:—		
Planking and repairs	110 25	
		$3,500 00

The principal expenditure in this division has been for work on the Walden Street Bridge. This bridge has been practically rebuilt, so far as the wood work is concerned. New planking and sheathing have been laid and the under part of the bridge covered with treated oak to protect the iron work from the action of the gases from the locomotives passing beneath.

A recent examination of this bridge discloses a serious condition in reference to the iron brackets which support the sidewalks on either side of the bridge. When the examination was made last year there was no evidence apparent that it would be necessary to do anything to these brackets. Since that time a great deterioration has taken place so that immediate repairs or renewal of the brackets is absolutely necessary.

As nearly all of the appropriation was expended for this purpose, only absolutely necessary repairs were made on the other bridges and probably a little more than usual will be required for them next year.

CLEANING STREETS.

Appropriation	$29,000 00	
Transferred from "Cambridge Street"	835 27	
Transferred from "Broadway"	198 20	
		$30,033 47

EXPENDED.

Labor	$26,542 07	
Teaming	901 91	
Hay and grain	1,833 51	
Hardware, tools, etc.	209 96	
Refilling sweeper brooms	148 48	
Sweeping machine repairs	272 32	
Waste barrels	125 00	
		30,033 25
Balance		$0 22

The amount expended for care of snow and ice this year was more than double that of last year as is shown by the following:—

	1901.	1902.
District 1	$1,639 05	$3,624 62
District 2	1,172 71	3,178 06
	$2,811 76	$6,802 68

As the appropriation for this year was no greater than that of last year we were not able to do all the street cleaning necessary and were obliged to charge nearly $2,500.00 to the "Maintenance" account in order to complete the regular fall cleaning. All the machinery in this division is in good condition, and with a sufficient appropriation our streets could be kept in excellent condition throughout the entire year.

COLLECTION OF ASHES.

Appropriation		$29,000 00
EXPENDED.		
Labor	$23,641 51	
Foreman's salary	833 25	
Teaming	62 50	
Hay, grain and straw	3,861 21	
Harnesses, repairs, etc.	320 58	
Horse and wagon covers	37 50	
Wagon and cart repairs	222 74	
Bicycle repairs and sundries	20 15	
		$28,999 44
Balance		$0 56

For a number of years past attention has been called in each annual report to the scarcity of dumps for the disposal of ashes, rubbish, etc., collected by this division. The time has now arrived when something must be done, and it might perhaps be made the subject of investigation by the Committee on Highways.

The modern method of disposing of this refuse in large cities is by incineration, and the suggestion is offered that furnaces, say three in number, might be located in sections of the City convenient for hauling short distances, so that the cost of this work may be kept within reasonable bounds.

MAINTENANCE.

Salary of Superintendent and Clerical Assistance.

Appropriation		$4,200 00
EXPENDED.		
Salary of Superintendent	$2,000 00	
Salary of Chief Clerk	1,456 00	
Temporary clerks	742 25	
		$4,198 25
Balance		$1 75

MAINTENANCE.

Macadamizing, Repairs, and General Expenses.

Appropriation		$66,122 38
EXPENDED.		
Salaries of district foremen	$ 2,510 00	
Labor	35,129 08	
Injured employees paid for time lost	250 50	
Teaming	1,435 63	
Amount carried forward	$39,325 21	

Amount brought forward	$39,325 21	
Carriages and carriage hire	119 45	
Fuel	1,489 17	
Gravel	455 44	
Hardware, tools, etc.	676 49	
Harnesses, horse clothing, etc.	715 87	
Hay, grain and straw	7,273 09	
Horses	607 50	
Horse shoeing stock	425 97	
Lighting	433 50	
Lumber	68 35	
Oils, paints, etc.	259 41	
Stable repairs	735 04	
Stable supplies	547 21	
Steam rollers, repairs and supplies	1,014 70	
Stone crushers, repairs and supplies	671 44	
Stone, field stone, etc.	7,164 85	
Stone, cracked stone	3,123 58	
Street signs	204 72	
Sundries	100 54	
Telephones and office supplies	704 98	
		66,116 51
Balance		$5 87

Included in the expenditures shown above is about twenty-five hundred dollars ($2,500) expended for labor in cleaning streets previously mentioned under that heading, and it will be noted therefore that the actual amount available for the principal work of the department, *i. e.*, the general repairs and operating expenses, is about sixty-three thousand five hundred dollars ($63,500), the smallest appropriation made for this work for a number of years.

The amount available for actual street work may be seen by the following schedule, showing the streets macadamized, resurfaced and repaired in each district, an itemized account of each street, and the total cost in each district: —

DISTRICT No. 1. (Wards 1, 2, 3, 4, 5, 6 and 7.)

Acorn Street: —		
Labor	$22 00	
Teaming	72 50	
Steam roller	12 00	
Gravel	22 40	
		$128 90
Amherst Street, from Greenhalge Street to Massachusetts Avenue: —		
Labor	$99 00	
Teaming	335 50	
Gravel	68 00	
		502 50
Amount carried forward		$631 40

Amount brought forward		$631 40
Antrim Street, from Broadway to Cambridge Street:—		
Labor	$158 00	
Teaming	295 00	
Steam roller	150 00	
Cracked stone	903 00	
Gravel	5 50	
		1,511 50
Blackstone Street, from River Street to Western Avenue:—		
Labor	$243 00	
Teaming	531 25	
Steam roller	201 00	
Cracked stone	994 50	
Gravel	37 75	
		2,007 50
Clinton Street, from Harvard Street to Massachusetts Ave:—		
Labor	$100 00	
Teaming	125 50	
Steam roller	78 00	
Cracked stone	280 50	
		584 00
Elm Street, from Lincoln Street to Cambridge Street:—		
Labor	$61 00	
Teaming	83 75	
Steam roller	45 00	
Cracked stone	225 00	
Gravel	3 25	
		418 00
Fayette Street, from Cambridge Street to Broadway:—		
Labor	$173 00	
Teaming	226 50	
Steam roller	141 00	
Cracked stone	678 00	
Gravel	2 75	
		1,221 25
Greenhalge Street, from Amherst Street to the Esplanade:—		
Labor	$294 00	
Teaming	629 50	
Gravel	123 00	
		1,046 50
Hamlin Street, from York Street to Plymouth Street:—		
Labor	$55 00	
Teaming	80 00	
Steam roller	6 00	
Cracked stone	40 50	
Gravel	22 50	
		204 00
Amount carried forward		$7,624 15

Amount brought forward		$7,624 15
Hardwick Street, from Berkshire Street to Portland Street:—		
Labor	$ 8 00	
Teaming	18 50	
Cracked stone	21 00	
Gravel	3 75	
		51 25
Hastings Square:—		
Labor	$21 00	
Teaming	52 50	
Steam roller	6 00	
Gravel	15 60	
		95 10
Howard Street, from River Street to Western Ave.:—		
Labor	$120 50	
Teaming	198 50	
Steam roller	129 00	
Cracked stone	528 00	
Gravel	2 75	
		978 75
Lee Street, from Massachusetts Avenue to Broadway:—		
Labor	$149 00	
Teaming	205 00	
Steam roller	135 00	
Cracked stone	750 00	
		$1,239 00
Marcella Street, from Berkshire Street to Portland Street:—		
Labor	$140 00	
Teaming	94 50	
Steam roller	24 00	
Cracked stone	178 50	
Gravel	7 00	
		444 00
Massachusetts Avenue, from Dana Street to Prospect Street:—		
Labor	$807 00	
Teaming	446 00	
Steam roller	360 00	
Cracked stone	830 00	
Gravel	11 00	
		2,454 00
Ninth Street, from Spring Street to Cambridge Street:—		
Labor	$162 00	
Teaming	266 00	
Steam roller	138 00	
Cracked stone	825 00	
		1,391 00
Amount carried forward		$14,277 25

Amount brought forward		$14,277 25	
Park Street, from Magazine Street to Pleasant Street:—			
Labor	$95 00		
Teaming	20 13		
Steam roller	54 00		
Cracked stone	165 00		
Gravel	2 00		
		336 13	
Rockingham Street:—			
Labor	$57 00		
Teaming	113 00		
Steam roller	45 00		
Cracked stone	163 50		
Gravel	4 00		
		382 50	
Spring Street, from First Street to Second Street:—			
Labor	$162 00		
Teaming	137 00		
Steam roller	90 00		
Cracked stone	291 00		
Gravel	7 50		
		687 50	
Upton Street, from Pleasant Street to Magazine Street:—			
Labor	$47 00		
Teaming	96 25		
Steam roller	57 00		
Cracked stone	136 50		
Gravel	2 50		
		339 25	
			$16,022 63

DISTRICT No. 2. (Wards 8, 9, 10 and 11.)

Appleton Street, from Huron Avenue to Concord Avenue..—			
Labor	$86 00		
Teaming	103 75		
Steam roller	108 00		
Cracked stone	381 00		
Gravel	3 75		
		$682 50	
Bates Street:—			
Labor	$34 00		
Teaming	25 00		
Steam roller	30 00		
Cracked stone	99 00		
		188 00	
Berkeley Street, from Craigie Street to Phillips Place:—			
Labor	$16 00		
Teaming	37 50		
Steam roller	18 00		
Gravel	11 25		
		82 75	
Amounts carried forward		$953 25	$16,022 63

Amounts brought forward		$953 25	$16,022 63
Bolton Street:—			
Labor	$147 00		
Teaming	23 00		
Steam roller	42 00		
		212 00	
(Material from Sherman Street.)			
Brattle Street, from Brattle Square to Willard Street:—			
Labor	$360 00		
Teaming	516 00		
Steam roller	390 00		
Cracked stone	1,248 00		
Gravel	15 25		
		2,529 25	
Cedar Street:—			
Labor	$6 00		
Teaming	18 50		
Steam roller	12 00		
Cracked stone	60 00		
		96 50	
DeWolfe Street, from Beaver Street to Cowperthwaite Street:—			
Labor	$10 00		
Teaming	31 25		
Steam roller	24 00		
Gravel	4 25		
		69 50	
Donnell Street, from Garden Street to Concord Avenue:—			
Labor	$44 00		
Teaming	48 38		
Steam roller	60 00		
Cracked stone	129 00		
Gravel	6 25		
		287 63	
Ellery Street, from Cambridge Street to Broadway:—			
Labor	$10 00		
Teaming	42 00		
Steam roller	36 00		
Cracked stone	108 00		
		196 00	
Flagg Street, from Banks Street to DeWolfe Street:—			
Labor	$14 00		
Teaming	43 50		
Steam roller	12 00		
Gravel	7 25		
		76 75	
Amounts carried forward		$4,420 88	$16,022 63

Amounts brought forward		$4,420 88	$16,022 63
Garden Street, from Mason Street to Massachusetts Avenue: —			
Labor	$16 00		
Teaming	26 00		
Steam roller	60 00		
Cracked stone	21 00		
Gravel	1 75		
		124 75	
Gorham Street, from Wendell Street to Hammond Street: —			
Labor	$55 50		
Teaming	84 50		
Steam roller	30 00		
Cracked stone	75 00		
Gravel	24 50		
		269 50	
Harvey Street, from Cedar Street to Montgomery Street: —			
Labor	$97 00		
Teaming	71 25		
Steam roller	54 00		
Cracked stone	189 00		
		411 25	
Hubbard Avenue, from Walden Street to Raymond Street: —			
Labor	$52 00		
Teaming	71 50		
Steam roller	78 00		
Cracked stone	249 00		
Gravel	4 75		
		455 25	
Quincy Street, from Cambridge Street to Kirkland Street: —			
Labor	$74 00		
Teaming	62 50		
Steam roller	42 00		
Cracked stone	42 00		
Gravel	1 50		
		222 00	
Regent Street; —			
Labor	$111 00		
Teaming	73 50		
Steam roller	84 00		
Cracked stone	270 00		
Gravel	75		
		539 25	
Amounts carried forward . . .		$6,442 88	$16,022 63

Amounts brought forward		$6,442 88	$16,022 63
Sargent Street:—			
Labor	$4 00		
Teaming	80 00		
Gravel	8 00		
		$92 00	
Somerville Avenue, from White Street to the Somerville line:—			
Labor	$11 00		
Teaming	29 50		
Steam roller	30 00		
Cracked stone	69 00		
		139 50	
Trail Street, from Brattle Street to Mt. Auburn Street:—			
Labor	$39 00		
Teaming	70 00		
Steam roller	54 00		
Cracked stone	204 00		
		367 00	
Trowbridge Street, from Cambridge Street to Broadway:—			
Labor	$19 00		
Teaming	62 50		
Steam roller	60 00		
Cracked stone	147 00		
		288 50	
Ware Street, from Harvard Street to Broadway:—			
Labor	$50 50		
Teaming	117 50		
Steam roller	75 00		
Cracked stone	267 00		
Gravel	2 00		
		512 00	
Mt. Vernon Street, from Massachusetts Ave. to Upland Road:—			
Labor	$56 50		
Teaming	85 25		
Steam roller	102 00		
Cracked stone	237 00		
Gravel	4 50		
		485 25	
Total, District No. 2			8,327 13
Total, Districts Nos. 1 and 2			$24,349 76
Amount expended for patching, District No. 1		$3,796 63	
Amount expended for patching, District No. 2		4,118 41	
			7,915 04
			$32,264 80

The question of the purchase of a stone ledge for the production by the department of the cracked stone used has been under consideration by the Committee on Highways, and several tests of stone offered for that purpose have been made. There is no doubt that if a favorably located ledge of suitable material can be found, improvements can be made in the construction of our streets.

A great deal of interest has been shown here and among numerous other cities in the vicinity, in the bituminous macadam laid in the Fall of 1901 on Temple Street. We have watched it very carefully, and at the present time it shows absolutely no signs whatever of wear or disintegration. It seems to me that the laying of this particular pavement is no longer an experiment; it has been demonstrated that it is a durable, economical and sanitary method of constructing streets, particularly in residential sections. A very large amount of it has been laid during the past year in cities in this state, such as Lowell, Worcester, Lynn, Waltham, Holyoke, Everett and Brookline. And within the past few months Bowdoin Street and Hancock Street in Boston, two streets with exceedingly steep and difficult grades, have been selected by the present Superintendent of Streets of Boston to be built of this pavement.

In view of all this it wonld seem a desirable thing to lay it on Massachusetts Avenue from Central Square to Quincy Square, one of the sections of Massachusetts Avenue which has been exceedingly difficult and expensive to keep in anything like good condition.

I would also suggest that whenever permanent repairs may be necessary on the streets in the Cambridge Heights district, that this pavement be laid.

On the next page will be found a table showing the streets laid out and accepted during the past year.

STREETS LAID OUT AND ACCEPTED, DECEMBER 1, 1901, TO DECEMBER 1, 1902.

Location of Street.						Plan.	
Name.	From	To	Length in Feet.	Width in Feet.	Date of Acceptance.	Made By	Date.
Wright street	Martin street	Hudson street	280	30	Dec. 28, 1901	W. A. Mason & Son	Nov. 5, 1901
Athenæum street	First street	Second street	399	50	Jan. 3, 1902	W. A. Mason & Son	Dec. 11, 1901
Blanche street	Massachusetts avenue	Auburn street	680	30	July 3, 1902	W. A. Mason & Son	June 18, 1901
Brookline street	Old Rangeway	Charles River	785	100	Mar. 15, 1902	City Engineer	Dec. 16, 1901
*Commercial avenue.	Bridge	Northerly line of dock	†269	60	Jan. 3, 1902	City Engineer	Mar. 5, 1894
Commercial avenue	Corner of Bridge street, widened to radius of 10 feet				Jan. 3, 1902	City Engineer	Mar. 5, 1894
Cottage Park avenue.	Massachusetts avenue	Southerly	350	40	Jan. 6, 1902	C. H. Gannett	Mar. 23, 1901
Jackson street	Rindge avenue	Harvey street	1,367	40	Jan. 3, 1902	City Engineer	Nov. 22, 1900
Line street	Kirkland street	Cambridge street	1,835	33	Nov. 26, 1902	City Engineer	Nov. 12, 1894
Munroe street	First street	Third street	1,093	50	Jan. 3, 1902	W. A. Mason & Son	Nov. 26, 1901
Museum street	Westerly line of Carver street.	Somerville line.	185	40	Oct. 15, 1902	W. A. Mason & Son	June 28, 1901
Pacific street	Brookline street	Sidney street.	470	40	Jan. 3, 1902	City Engineer	Nov. 22, 1900
Putnam avenue	Corner of River street, widened to radius of 32 feet				July 3, 1902	City Engineer	July 10, 1872
Second street	Binney street	Athenæum street	500	50	Jan. 3, 1902	W. A. Mason & Son	Dec. 18, 1901
Warland street	Pleasant street	River street	247	40	Nov. 1, 1902	City Engineer	Oct. 8, 1901

* Widening.

† Not included in length of new streets.

Total length of accepted streets, December 1, 1901, 93.848 miles

Total length of streets accepted from December 1, 1901, to December 1, 1902, 7,911 feet or 1.498 miles.

Total length of accepted streets, December 1, 1902, 95.399 miles.

PAVING — CROSSINGS AND REPAIRS.

Appropriation		$10,000 00
EXPENDED.		
Labor	$8,076 24	
Teaming	655 02	
Artificial stone sidewalk repairs	29 10	
Bricks	198 72	
Cement	324 20	
Granite flagging	325 08	
Granite paving blocks and recutting	191 08	
Gravel, freight and loading	148 03	
Lanterns, oil, etc.	50 38	
		9,997 85
Balance		$2 15

The above summary shows the expense of laying and repairing crossings, and repairs to sidewalks, edgestones and gutters. For several years past, the appropriation for this work has been the same, although the sidewalks to be kept in repair increase at the rate of three or four miles per year, until now there are so many sidewalks in almost unsafe condition that more money must be appropriated for repairs alone next year.

The use of vitrified bricks for street crossings has become so general that nearly all crossings now laid on macadam streets are constructed of that material. It makes a smooth, clean and durable crossing, and nearly all of those laid by us this year were laid with vitrified bricks left over from the previous year.

PAVING — EDGESTONES AND SIDEWALKS.

Appropriation		$25,000 00
EXPENDED.		
Labor	$10,740 46	
Teaming	1,484 38	
Allowance on artificial stone sidewalks	1,850 46	
Bricks	682 00	
Edgestone	9,091 30	
Gravel, freight and loading	618 24	
Hardware, tools, etc.	427 49	
Lumber, oil and sundries	105 62	
		24,999 95
Balance		$ 05

To this appropriation is charged the expense of all new edgestones, and brick or artificial stone sidewalks.

The following tables show by districts the new sidewalk work done during the year, viz., the number of feet of new circles and edgestones set, and square yards of new brick sidewalk laid, with the expense on each street: —

PAVING DISTRICT No. 1.

STREETS.	Linear Feet Straight Curb.	Linear Feet Circle Curb.	Square Yards Brick Sidewalk.	Amount.
Allston Street, No. 82	47	9.5	28	$102 36
Auburn Street, Nos. 204 and 210	85.3		33.5	168 46
Blackstone Street, north side, between River Street and Western Ave.	741.7	5.3		1,235 76
Cherry Street, between Harvard Street and Washington Street	802	9.5	541	1,581 40
Elm Street, west side, from Harvard Street, north, 90 feet	92.7	3.2	65	220 52
Green Street, Nos. 544 to 564	150			282 48
Hamlin Street, between York Street and Plymouth Street	408			474 74
Hampshire Street, No. 162	70.4	5		100 48
Hardwick Street, between York Street and Plymouth Street	583.8			854 89
Howard Street, east side, between River Street and Western Avenue	440	21		563 78
Howard Street, west side, between Western Avenue and Grigg Street	168			205 01
Main Street, No. 320			8.5	39 04
Market Street, No. 40	65			138 36
Market Street, north side, from Union Street, west, 20 feet	20			24 53
Plymouth Street, Nos. 48 to 50			25.3	23 88
Rockingham Street, between Henry Street and Granite Street	575	6.2		777 28
Seventh Street, east side, between Cambridge Street and Gore Street	92		58	205 65
Union Street, east side, from Market Street, 50 feet	57.5			88 52
Washington Street, south side, from Clark Street, to west line of No. 218.	115			136 18
Willow Street, west side, between Palermo Street and Cambridge Street.			225	298 77
Total	4,513.4	59.7	984.3	$7,522 09

PAVING DISTRICT No. 2.

STREETS.	Linear Feet Straight Curb.	Linear Feet Circle Curb.	Square Yards Brick Sidewalk.	Amount.
Appleton Street, between Concord Avenue and Huron Avenue	1,406	76.6	659	$2,304 95
Berkeley Street, No. 3	68			87 86
Cambridge Street, north side, at Holy Ghost Hospital	469.7	38		742 31
Cameron Street, near Somerville line	25.4			36 22
Cedar Street, both sides, between Massachusetts Ave. and Rindge Ave	2,200.6	7.3		3,142 14
Clay Street, Nos. 8, 10, 12, 14	200.8			245 79
Ellery Street, west side, between Broadway and Cambridge Street	225.4		362.6	701 58
Gorham Street, between Hammond Street and Wendell Street	607.6			708 64
Green Street, corner of Hancock Street	42			57 59
Harvey Street, between Montgomery Street and Cedar Street	757.2	48.8	825	1,767 90
Homer Avenue, east side	650			917 50
Homer Avenue, west side (entire)	646.6			888 98
Hubbard Avenue, north side, between Raymond Street and Walden St.	757.6			921 53
Kirkland Street, south side, at New Church	193			298 20
Larch Road, east side	955.5	42	90	1,584 07
Mount Vernon Street	78.7			91 11
Quincy Street, east side, between Cambridge Street and Kirkland St.	317 6			335 46
Reed Street, in front of Reed Street School			63	77 06
Regent Street, between Massachusetts Avenue and Railroad	721.5		525.8	1,352 32
Rindge Avenue, between Massachusetts Avenue and Groveland Road	414.3	14.7	426	1,007 39
Rindge Avenue at Wyman School			87.6	89 45
Rindge Avenue, Nos. 173-175	57		51	130 36
Trowbridge Street, between Broadway and Cambridge Street	352.8		270.6	776 49
Walden Street, between King Street and Cypress Street			96.2	92 57
Walden Street, Nos. 235-239	45			57 32
Total	11,192.3	227.4	3,456.8	18,414 79

Owing to our inability to obtain proposals for satisfactory sidewalk bricks this year, the amount of brick sidewalks laid is comparatively small, the greater part of the appropriation having been expended in setting edgestones on streets where there were no sidewalks.

There has been a considerable increase in the amount of artificial stone sidewalks laid this year, and, in fact, it is the most popular form of sidewalk now laid in front of first-class buildings.

As a properly constructed artificial stone sidewalk will need no repairs whatever for at least ten years, it would seem to me that a most liberal policy might be adopted by the City in relation to persons who desire to lay this form of walk.

The usual amount of uncompleted orders for edgestones and brick sidewalks remains in the files of the department this year.

STREET WATERING.

Appropriation			$29,000 00
EXPENDED.			
Salary of foreman		$1,006 50	
Sprinkling contracts and labor		24,299 68	
Cost of levying assessments		156 77	
Stand pipe repairs		246 35	
Bicycle repairs and sundries		133 32	
Hay and grain		87 72	
Foreman's wagon		150 00	
Watering cart repairs.			
Labor	$1,544 96		
Hardware, iron, etc.	230 96		
Lumber and mill work	66 47		
Paints, oils, varnish, etc.	490 75		
Springs	115 91		
Tanks, attachments, etc.	469 34		
		2,918 39	
			28,998 73
Balance			$1 27

The above account shows the cost of watering all the accepted streets of the City in accordance with the provisions of the legislative act authorizing cities to water streets and to assess abuttors for the expense thereof, and of watering a number of private ways which were paid for in full by the abuttors.

The expense for this division is about $2,500 greater than last year on account of the increase paid to the sprinkling contractors. The rate per month for each cart was raised from $75 to $85, and a still further

increase is probable next year. The change in ward lines made necessary a rearrangement of the street watering assessment books, and these have been made so that new books will have to be written only once every four years.

GRANITE BLOCK PAVING.

BRIDGE STREET.

Appropriation			$7,031 00
EXPENDED.			
Labor	$612 43		
Teaming	45 00		
Granite paving blocks	6,321 16		
Gravel, freight and loading	52 39		
		$7,030 98	

BROADWAY.

Appropriation			$4,181 31
EXPENDED.			
Labor	$1,084 36		
Teaming	348 13		
Granite paving blocks	2,487 10		
Granite edgestone and flagging	84 70		
Gravel, freight and loading	172 77		
Oil	4 25		
		$4,181 31	

CAMBRIDGE STREET.

Appropriation			$4,164 73
EXPENDED.			
Labor	$3,328 69		
Gravel, freight and loading	381 17		
Granite flagging	327 95		
Hay and grain	115 02		
Oil	11 90		
		$4,164 73	

FRANKLIN STREET.

Appropriation			$5,000 00
EXPENDED.			
Labor	$1,575 31		
Teaming	306 25		
Granite paving blocks	2,744 74		
Granite edgestone and flagging	30 57		
Gravel, freight and loading	308 48		
Hay and grain	31 68		
		$4,997 03	
Amounts carried forward		$20,374 05	$20,377 04

Amounts brought forward		$20,374 05	$20,377 04
MUNROE STREET.			
Appropriation			4,000 00
EXPENDED.			
Labor	$1,080 26		
Granite paving blocks	2,349 96		
Granite edgestone	422 82		
Gravel, freight and loading	120 00		
Cracked stone	25 03		
		$3,998 07	
SHERMAN STREET.			
Appropriation			$9,500 00
EXPENDED.			
Labor	$2,586 92		
Teaming	421 88		
Granite paving blocks , ...	5,220 60		
Granite edgestone and flagging . . .	944 79		
Gravel, freight and loading	311 01		
Oil	11 70		
		$9,496 90	
Totals		$33,869 02	$33,877 04

Bridge Street.

The report and findings of the special commission appointed by the Superior Court in the matter of the alterations of the grade crossing at Prison Point Street, contain the following in reference to Bridge Street:—

"If the City of Cambridge shall so choose new paving blocks shall be furnished by said City at its own expense, and laid by the Railway Company. The old paving blocks shall be the property of and be removed by the said City."

It was found upon examination of the old paving blocks on Bridge Street that they were totally unfit for the purpose and an appropriation was made for the purchase of new, first-class blocks.

Eighty-two thousand and ninety-three granite blocks were furnished to and laid by the railroad company. The balance of the appropriation was expended in relaying the pavement from the point where the railroad company left off, to the transfer station where the City finished last year. Bridge Street its entire length is now in good condition, and ought not need any extensive repairs for a considerable time.

Broadway.

The work on this street was a continuation of that begun last year and included the southerly side of the street between Davis Street, and

Windsor Street. Their still remains a small section uncompleted on the north side of the street between Clark Street and Windsor Street, which I presume will be provided for during the coming year.

Cambridge Street.

This street was repaved between Third Street and Lechmere Square. Most of the work was done with paving blocks already in the street, what blocks were required being carted from Bridge Street and from the Hampshire Street yard. The pavement is now in good condition between Lechmere Square and the railroad crossing. Beyond the railroad crossing towards Harvard Square some repairs will be necessary during the coming year.

Franklin Street.

This street was repaved between Brookline Street and Sidney Street. Edgestones were set where necessary and new driveways constructed at the works of the National Biscuit Company. A large amount of heavy teaming on this street renders a stone pavement necessary.

Munroe Street.

It was expected that the construction of the new Cambridge Bridge would necessitate the closing of First Street at its southerly outlet and that provision would have to be made for an outlet for teaming north of the Broad Canal. With this in mind an appropriation was made for building Munroe Street; and that part of it between First Street and Second Street has been constructed. There is some doubt now as to whether the necessity exists, and, under the circumstances the completion of the paving of this street may be deferred for the present.

Sherman Street.

The section of Sherman Street between Rindge Avenue and the railroad has in past years been one of the most difficult in the City to keep in anything like decent condition. It has now been paved with the best granite blocks in a thorough manner. Edgestones have been set on both sides of the street, and the work has undoubtedly proven of great benefit to the large manufacturing concerns in that vicinity.

VITRIFIED BLOCK PAVING.

BROOKLINE STREET.

Appropriation		$10,000 00
EXPENDED.		
Labor	$3,986 97	
Blocks, (vitrified) and freight	3,581 48	
Amounts carried forward	$7,568 45	$10,000 00

Amounts brought forward	$7,568 45		$10,000 00
Cement	977 20		
Concrete stone	309 80		
Cracked stone	184 76		
Granite flagging	94 99		
Gravel, freight and loading	199 29		
Hardware, tools, etc.	31 72		
Hay and grain	398 60		
Lumber and oil	56 34		
Road pitch	69 48		
Use of steam roller and fuel	103 35		
		$9,993 98	

RIVER STREET.

Appropriation			$10,000 00
EXPENDED.			
Labor	$4,555 96		
Blocks, (vitrified) and freight	3,746 24		
Cement	1,050 10		
Concrete stone	374 00		
Gravel, freight and loading	132 18		
Hardware, tools, etc.	60 42		
Lumber	34 84		
Road pitch	46 26		
		10,000 00	
Totals		$19,993,98	$20,000 00

Brookline Street.

The work on this street is a continuation of the vitrified paving begun there in 1901, and has been constructed this year from Auburn Street to the Boston Elevated Railway Company's car house near Erie Street. The work has been performed in the usual manner, the blocks being laid on six-inch concrete base. A new style of paving block has been used, so that there are now three different kinds of blocks laid upon this street, and an excellent opportunity will be given to test their relative wearing qualities. An order of the City Council recently passed has requested estimates for the completion of this street, and I presume it is the intention to complete the work next year.

River Street.

This street has been paved with vitrified blocks from Central Square to Kinnaird Street. The blocks are the same as those used on Brookline Street, and the work has been done in the same manner. The order of the City Council above referred to also includes a request for estimates

for the completion of this street. It is one of the most important in the City, and as it does not seem that there is any pavement better suited for the amount of traffic over it, I should strongly recommend that the remainder of the street be completed with this style of pavement as soon as possible.

CONSTRUCTION OF STREETS.

BELMONT STREET.

Appropriation		$1,235 14
EXPENDED.		
Labor	$885 67	
Teaming	67 50	
Edgestone	203 28	
Cement	11 00	
Gravel	24 70	
Oil	6 38	
Rent of land and use of track	34 00	
	$1,232 53	

DUDLEY STREET.

Appropriation		$3,500 00
EXPENDED.		
Labor	$1,127 48	
Teaming	85 00	
Freight on gravel	16 00	
Hay and grain	130 25	
Oil and fuel	55 23	
Stone: Cracked stone	304 14	
Edgestone	956 78	
Field stone	707 78	
Paving blocks	117 18	
	$3,499 84	

GRANITE STREET.

Appropriation		$391 31
EXPENDED.		
Labor	$51 50	
Cracked stone	47 06	
Gravel	25 56	
Vitrified bricks	262 44	
	$386 56	
Amounts carried forward	$5,118 93	$5,126 45

Amounts brought forward		$5,118 93	$5,126 45

PLEASANT STREET.

Appropriation			$2,347 50
EXPENDED.			
Labor	$1,089 16		
Teaming	721 25		
Gravel	435 60		
Edgestone	63 62		
Flagging	37 87		
		$2,347 50	

REED STREET.

Appropriation			$4,000 00
EXPENDED.			
Labor	$1,283 73		
Teaming	85 00		
Freight on gravel	32 00		
Hay and grain	68 32		
Cracked stone	964 24		
Edgestone	1,301 19		
Vitrified bricks	252 00		
Oil	10 45		
		$3,996 93	

SUNDRY STREETS, WARDS 6 AND 7.

Appropriation			$3,250 00
EXPENDED.			
Labor	$1,711 21		
Edgestone	744 39		
Field stone	575 30		
Gravel	214 25		
		$3,245 15	

SUNDRY STREETS, WARD 11.

Appropriation			$4,000 00
EXPENDED.			
Labor	$2,537 51		
Ballast stone	93 00		
Cracked stone	840 17		
Freight on gravel	58 80		
Fuel and oil	114 82		
Gravel and filling	154 50		
Hay and grain	191 11		
		$3,989 91	
Amounts carried forward		$18,698 42	$18,723 95

Amounts brought forward . . .		$18,698 42	18,723 95

WRIGHT STREET.

Appropriation			$1,150 00
EXPENDED.			
Labor	$580 89		
Teaming	15 00		
Edgestone	282 99		
Oil	8 50		
Vitrified bricks	262 44		
		$1,149 82	
		$19,848 24	$19,873 95

Belmont Street.

The amount expended on this street was a balance carried over from last year for the purpose of completing that part of the work of widening Belmont Street which we were unable to finish last year on account of the operations of the Fitchburg Railroad Company at the bridge over their tracks at Mount Auburn station. The work done this year has been the setting of edgestone and building the street at the junction of Holworthy Street, and laying crossings necessary.

Dudley Street.

This street has been thoroughly rebuilt from Massachusetts Avenue to Montgomery Street. Edgestones have been set on both sides of the street, and catch-basins and crossings constructed where necessary.

Granite Street.

The amount expended on this street was for building up the sidewalks and evening the surface laid last year. This was necessary on account of the fact that the work last year was not completed until very late in the season.

Pleasant Street.

This street was extended from a point near Florence Street to the Parkway at Captain's Island, and that part of it has been newly constructed. From Putnam Avenue to Florence Street the street has been resurfaced. Catch basins have been constructed where necessary throughout the entire length.

Reed Street.

This street has been thoroughly macadamized throughout its entire length; edgestones have been set on both sides. Catch-basins and crossings have been built where necessary, and it is now in first-class condition.

Sundry Streets, Wards 6 and 7.

Under this appropriation Blanche Street was macadamized from Massachusetts Avenue to Auburn Street. Edgestones were set on both sides of the street, and catch-basins constructed. Erie Street from Brookline Street to Waverly Street was filled to sub-grade with material taken from Brookline Street and River Street, and will be next year in condition to receive the top surface, whatever that may be decided to be. Sidney Street from Allston Street to Erie Street was built very nearly to grade with good street gravel taken from the gravel bank in Brookline.

Waverly Street has been partly filled with the same material and the work can be carried on there during the present winter.

Sundry Streets in Ward 11.

Under this appropriation Rindge Avenue from Sheridan Square to the pond has been thoroughly resurfaced.

Clay Street and Jackson Street have been filled to grade and surfaced, sidewalks being built on each side. This work, in connection with the amount expended on Dudley Street and Reed Street and Sherman Street has brought the streets in this section to first-rate condition, and the remainder of the work to be done there this next year can probably be taken care of in the regular maintenance appropriation.

Wright Street.

By an order of the City Council approved December 28th, 1901, Wright Street was widened five feet on each side, from Martin Street to Hudson Street, and the amount expended as shown above has been for setting edgestones on both sides of the street, and rebuilding it in a thorough manner.

I acknowledge the courtesy shown by His Honor, the Mayor, in directing the affairs of this department. The unusual number of special appropriations has increased the difficulties, and his sound business judgment has assisted us in many ways.

My acknowledgements are extended to the Committee on Highways, the members of the City Council, and to the various officials of the City for their courtesy and consideration. The value of the work performed by the employees in general throughout the department is recognized and most heartily commended.

Following is a schedule of property in charge of this department: —

REAL ESTATE.

City Yard and Stable, Raymond Street: —		
Land, 272,670 ft., Assessors' valuation	$27,000 00	
Stable, sheds, scales, stone crusher, etc.	27,000 00	
		$54,000 00
City Stable, Hampshire Street: —		
72,661 square feet of land, Assessors' valuation	$30,000 00	
Stable, sheds, scales, stone crusher, etc.	21,000 00	
		51,000 00
Yard and Pound, east side of Norfolk Street: —		
39,600 square feet of land, Assessors' valuation		12,000 00
Yard and Wharf at River Street: —		
41,546 square feet of land, Assessors' valuation		17,000 00
		$134,000 00

PERSONAL PROPERTY.

78 horses	$11,700 00	
49 watering carts	12,000 00	
47 carts (29 single, 18 double)	4,700 00	
80 sets of harness (8 chain)	2,100 00	
23 sleds, 2 snow-plows, 1 sleigh	1,350 00	
2 snow levellers, 16 gutter plows	340 00	
2 buggies, 3 foreman's wagons	300 00	
3 tool wagons, 2 bicycles	175 00	
2 hayracks, 2 caravans, 2 pungs	275 00	
2 paper carts	200 00	
8 large (Shadbolt) ash carts	2,500 00	
2 Watson carts	350 00	
4 steam rollers	6,000 00	
1 two horse section roller	150 00	
4 road machines, 2 road scrapers	1,200 00	
7 side street sweepers, 1 gutter sweeper	1,500 00	
4 pick up sweepers	2,000 00	
Tools, stable furniture, etc.	4,000 00	
Lumber, iron, cement, paints, oils, etc.	1,500 00	
100 ft. straight edgestone, 50 ft. circles	90 00	
38,000 granite paving blacks, (seconds, at $20.00)	760 00	
33,000 vitrified blocks	861 00	
1,400 tons field stone and cracked stone	1,400 00	
		55,451 00
		$189,451 00

CHARLES A. BROWN,
Superintendent of Streets.

REPORT OF THE BOARD OF PARK COMMISSIONERS

To the Honorable, the City Council of the City of Cambridge:—

GENTLEMEN:—The Board of Park Commissioners has the honor to submit herewith its tenth annual report for the year ending November 30, 1902, and also the ninth annual report of the Acting General Superintendent of Parks, as required by Section 4 of the Ordinance establishing a Park Department.

RESULTS FOR THE YEAR 1902.

Far less construction work has been done during the year 1902 than during any other year since the City undertook park construction. Ever since the passage of the Act of 1893, authorizing the City to construct and maintain parks, the City Council has appropriated annually not less than the sum of $100,000, but during the year 1902 it appropriated but $50,000 in addition to the unused balance of $6,322.89 appropriated during 1901, or a total of $56,322.89. Nearly one-half of this amount, or $20,352.34, was used in settlement of damages for the original taking of the land of Norcross Brothers at the foot of Brookline Street, thus leaving the sum of $35,970.55. Of this amount, $16,676.16 was used in the extension of the river driveway east of Boylston Street, while the balance was used for general purposes.

The Commissioners hoped to be able to complete the driveway from Harvard Bridge to Brookline Street, but the failure of the City Council to make the full appropriation of $100,000 that was asked for, prevented them from doing that work. They were, however, able to get a rough road through, so that it is possible now for one to walk dryshod from Magazine Street to Harvard Bridge.

The section from Boylston Street east to Flagg Street has therefore received the most attention during the year, and with the exception of the beach work is practically completed. The driveway affords a very necessary, convenient and popular connection from the upper river to Putnam Avenue. Considerable remains yet to be done on the beach; its unsight-

liness will continue until the funds at the disposal of the Commissioners are sufficient to warrant them in undertaking the work.

The Commissioners are constantly in receipt of inquiries as to the matter of the completion of the river road. There is nothing which seems so peremptory as this. Experience has shown that every foot of river road that has been constructed has had a far-reaching effect on valuations, not only of land directly abutting, but for a considerable distance from the road. The extension from Flagg Street to Western Avenue is imperatively demanded, as also the completion of the road from River Street to Magazine Street and from Brookline Street to Harvard Bridge.

In the matter of maintenance, the old problem of endeavoring to make one dollar do for two has been still with us. To the fact that we have been required to maintain the parks on far less than they could be properly maintained, has been added the new requirement or method of making appropriations by which the particular class of expenditure is put on an allowance, as it were, instead of giving discretion to the Commissioners to use such portions of the appropriation for such purposes as seem to them from time to time proper. The result is that too much is appropriated for one purpose and too little for another; and while it is true that at the end of the year balances may be transferred by the City Council yet the system has been found to be very confusing and unsatisfactory.

One of the principal difficulties met with in the matter of maintenance is in the proper policing of the parks and public grounds. Experience has shown that no public place, whether large or small, can safely or properly be opened to the public unless constantly policed. The use of these places by the public is also limited unless the same can be policed. The Commissioners have never been able to do this, because of a lack of appropriation.

A bronze statue of Charles Sumner of heroic size, together with the pedestal, was offered to the City through the Park Commissioners by Prof. Edward Cummings, on behalf of a certain unknown donor, and after acceptance by the City Council was placed on the delta between Cambridge and Kirkland Streets. The statue is a work pronounced by experts to be of decided merit, and certainly is an ornament to the locality.

BOYLSTON STREET BRIDGE.

The Commissioners have before pointed out the need of a new bridge over the river at Boylston Street. There is no bridge in the City that is

used in the same way as this one, and no bridge which the safety of the public requires replacing more than this. A move has been made during the last year which promises good results.

Various interests are concerned in the rebuilding of the bridge; the City of Boston, by virtue of its ownership; the State, by virtue of the reservations on the river of the Metropolitan Park Commission; Harvard College, by the proximity of Soldiers' Field, and its peculiar use of the bridge; and the City of Cambridge, by its ownership and park work on its side. Arrangements have been made for a conference of these interests in an endeavor to agree upon a form of structure and method of approaches, the height of the bridge above the water, and other details, and as a result, legislation looking towards the building of the bridge will probably be asked for at the coming session. The Commissioners feel that the bridge should be ornamental as well as useful and adapted to the particular localities which it will be designed to connect. They also feel that the bridge should be a comparatively low-level bridge, in order to avoid elevating the approaches on either side of the river, and yet at the same time should be high enough to permit a proper use of the river for pleasure purposes without necessitating a draw.

TREES.

A great deal of work has been done during the year on the trees and considerable money has been expended. The year has been an unfortunate one in that trees have been visited with about every form of harmful insect known, including the brown-tail moths, gypsy moths, tussock moths, elm-leaf beetle, and other destructive insects. As a whole, the public shade trees have been well cared for. Considerable work in the way of trimming and the removal of dead trees and stumps has also been done, but much more remains to be done. The Commissioners have already begun the work of removal of nests from the trees and expect to continue as the weather permits during the winter. Last year the Commissioners were unable to begin until spring, and consequently could not do all that was necessary before the caterpillars left their nests.

Legislation was obtained last winter authorizing the Commissioners to enter private lands for the purpose of cleaning private trees, and this opportunity was availed of to a considerable extent. It seems to them that further legislation is desirable which shall require owners either to clean their own trees or pay to the City the expense of so doing. In fact, it would be better that the City should undertake the work, because otherwise it would not be thoroughly done.

SCHOOLHOUSE GROUNDS.

Improvements in schoolhouse grounds are constantly requested. The Commissioners would like to make many improvements in the grounds but a lack of money prevents. A little is done each year, however; but at the present rate it will take a great many years to accomplish what has been asked for.

METROPOLITAN CONNECTION.

We renew our annual request for access to the State Reservations, for a connection between Fresh Pond and the Mystic, between Somerville and Cambridgeport, between Gerry's Landing and the Speedway and between Brookline Street and St. Mary's Street. Cambridge has paid a large proportion of the expense of the Metropolitan Park System but as yet has received no direct benefit.

FORT WASHINGTON.

Fort Washington is said to be the last of the Revolutionary forts in Cambridge. It was erected by the express orders of Washington in November, 1775. In his report he said:—"Arrived in Cambridge July 2, 1775. On our side we have thrown up intrenchments on Winter and Prospect Hills, the enemy's camp in full view at the distance of little more than a mile. Such intermediate points as would admit landing I have, since my arrival, taken care to strengthen down to Sewall's farm, where a strong intrenchment has been thrown up. The troops in this town are entirely of the Massachusetts, under Putnam and Heath."

Paige's "Cambridge" says:—"At the next angle of the river, on the easterly side of Pine Grove, anciently called the Oyster Banks, there was another 'three gun battery' which commanded the river down to Lechmere's Point."

Without doubt this fort took part in the bombardment of Boston, which led to the evacuation March 17, 1776.

After the troops abandoned the fort it was carefully preserved by the Dana family, on whose land it was located. In the early fifties they placed the lot of land surrounding the fort in the hands of trustees, together with a fund for its preservation.

On January 6, 1857, Mayor Sargent announced that "a proposition had been made by the owners to place under control of the City another piece of land which is hallowed by associations, not only connected with

one of the most important events in the history of our country but with a name dear to every American heart." The Mayor referred to Fort Washington, which was the only remaining work of the kind in a good state of preservation.

He said further:—"I am informed that both the proprietors and trustees are desirous that this fort, lying within our borders, should become the property of the City, to be preserved for the associations that cluster around it. They propose to transfer to the City the grounds, the fund and the ordnance (promised by the Government) on condition that the City will appropriate a sufficient sum in addition to build a fence and ornament it in a suitable manner, and forever preserve it as a public ground."

The City Government acted promptly on the Mayor's suggestion. January 15, 1857, the Council appointed a special committee of six, and on January 21st, a special committee of four was appointed by the Aldermen. On July 8th, the Mayor reported the reception of deed of about 37,000 feet of land.

A flagstaff was erected and the flag was displayed for the first time on February 22, 1858.

In January of the same year the Mayor was requested to petition the Legislature for aid towards fencing the fort. The Resolve for the appropriation was passed and was approved March 26, 1858. The fence was at once built at a cost of $4,457, of which sum the State appropriated $2,000.

The Secretary of War contributed three 18 pounder guns, and the Secretary of the Navy furnished the gun carriages to mount them.

At the time the battery was thrown up Cambridge was the headquarters of Washington, and was an armed camp during the siege of Boston.

It is not difficult to picture in one's mind the stirring times of that period, and the part that this small battery played in the general bombardment of Boston; the presence of General Washington and his generals, Heath and Putnam, the men in the ranks — patriots drawn from all classes of life, thinly clad for the most part, incompletely equipped, and poorly fed, but united in their thirst for freedom.

It is a better picture to contemplate than the one which today exists, this neglected battery stranded, in consequence of physical changes in the river, a half mile from the shore.

Its condition is a discredit to Cambridge. The fence surrounding it is broken in places, the grass plot uneven and poorly cared for, the moat partially filled, the breastworks worn and ragged, the guns tilted at all angles.

Since the fort was placed under the care and control of the local Park Commissioners its proper maintenance has frequently been discussed, but each time they have arrived at the same point — lack of funds.

For many years the fort has been a resort for hoodlums, who have no sense of propriety, nor even decency, and they have been allowed absolute freedom to do about as they liked. The Commissioners have been endeavoring to correct this disgrace to our City, but with only partial results.

A small appropriation of $500 is necessary to put the fort in proper condition, and proper police protection is necessary to keep it so.

WORK OF THE COMING YEAR.

The Commissioners hope that the full amount of $100,000 will be appropriated at the beginning of the coming year, in order that they may make their plans accordingly. Two things which they desire and believe should be done are the extension of the river road from Flagg Street to Western Avenue and the completion of the road from River Street to Magazine Street and from Brookline Street to Harvard Bridge. Nothing seems to the Commissioners more important than this, and nothing more advantageous to the City. The Commissioners also ask that the appropriation for maintenance be increased to an amount sufficient to enable them to properly care for what has been put in their charge and to enable the public to enjoy the public places to the fullest extent. They also ask that, as heretofore, the expenditure of the maintenance appropriation as a whole shall be within their discretion and not limited in particular ways, as was the case during the past year.

On July 1, 1902, Mr. H. E. Whiting, who for nearly five and one-half years had been Superintendent of Parks, resigned his position in order to enter into business. The Commissioners desire to express their appreciation of his earnest, faithful and successful work and regret the loss to the City of his valuable service. On his resignation Mr. J. A. Holmes, who had been for some years in the City Engineer's office and had had special charge of park construction work, was chosen by the Commissioners as Acting Superintendent of Parks and is now filling that position.

FINANCIAL STATEMENT.

PARK LOAN.

Amount of unused balance of 1901 appropriation reappropriated Dec. 19, 1901	$6,322 89
Amount appropriated March 27, 1902	50,000 00
	$56,322 89

PARK MAINTENANCE.

Shade Trees.		
Amount appropriated April 17, 1902	$5,500 00	
Amount transferred from commons, squares and public grounds Oct. 22, 1902	550 00	
Amount transferred from bath house Oct. 22, 1902	200 00	
		$6,250 00
Cambridge Field and Shelter.		
Amount appropriated April 17, 1902	4,500 00	
Amount appropriated May 15, 1902	650 00	
		5,150 00
Commons, Squares and Public Grounds.		
Amount appropriated April 17, 1902	5,600 00	
Amount transferred to shade trees Oct. 22, 1902	550 00	
		5,050 00
Brown Tail Moth Extermination.		
Amount appropriated Jan. 23, 1902	1,500 00	
Amount appropriated Feb. 19, 1902	1,500 00	
Amount appropriated Mar. 21, 1902	1,500 00	
Amount appropriated April 10, 1902	300 00	
		4,800 00
Section G.		
Amount appropriated April 17, 1902	3,000 00	3,000 00
Sections A, B, D, F and Rindge Field.		
Amount appropriated April 17, 1902	2,500 00	2,500 00
Bath House.		
Amount appropriated April 17, 1902	2,500 00	
Amount transferred to shade trees Oct. 22, 1902	200 00	
		2,300 00
General Account.		
Amount appropriated April 17, 1902	400 00	400 00

During the year bills payable from Park Loans have been approved by the Board and certified to the Auditor to the total amount of $55,528.94, as follows: —

PARK LANDS AND CONSTRUCTION.

River Parkway, Section A.		
Construction account	$90 59	$90 59
River Parkway, Section B.		
Construction account	2,716 72	2,716 72
River Parkway, Section C.		
Construction account	2,199 73	
Land account	20,355 44	
		22,555 17
River Parkway, Section D.		
Construction account	5,590 22	5,590 22
River Parkway, Section E.		
Construction account	459 45	459 45
River Parkway, Section F.		
Construction account	16,760 36	16,760 36
River Parkway, Section H.		
Construction account	887 02	887 02

Nursery.		
Construction account	703 39	703 39
Rindge Field.		
Construction account	369 80	369 80
Cambridge Field.		
Construction account	363 52	363 52
Porter Square.		
Construction account	10 37	10 37
East Cambridge Embankment.		
Construction account	3 92	3 92
General Account.		
Construction account	4,022 24	4,022 24
Office Expenses.		
Construction account	996 17	996 17
Total amount expended		$55,528 94
Balance unexpended		793 95

During the year bills payable from Park Maintenance have been approved by the Board and certified to the Auditor, as follows: —

	Amount expended.	Balance unexpended.
Shade trees	$6,210 56	$39 44
Cambridge Field and Shelter	5,111 97	38 03
Commons, squares and public grounds	5,045 53	4 47
Brown tail moth extermination	4,799 06	94
Section G	2,941 47	58 53
Sections A, B, D, F and Rindge Field	2,434 20	65 80
Bath house	2,291 98	8 02
General account	399 28	72

From the above it will be seen that the amount expended during the year under Park Loans was divided as follows: —

Construction account	$35,173 50
Land account	20,355 44
Total	$55,528 94

A detailed classification of the expenditures will be found in the report of the Acting General Superintendent.

Since the beginning of the work in 1893 there has been expended to date, of money raised under Park and Esplanade Loans, the sum of $1,354,897.38.

The division is as follows: —

River Parkway, Section A.		
Construction account	$154,905 64	
Land account	1,901 83	
		$156,807 47
River Parkway, Section B.		
Construction account	87,883 97	87,883 97

River Parkway, Section C.		
Construction account	51,500 28	
Land account	28,701 08	
		80,201 36
River Parkway, Section D.		
Construction account	91,068 08	
Land account	95,047 25	
		186,115 33
River Parkway, Section E.		
Construction account	930 47	
Land account	60,110 00	
		61,040 47
River Parkway, Section F.		
Construction account	44,816 81	
Land account	66,432 36	
		111,249 17
River Parkway, Section G.		
Construction account	120,528 21	
Land account	85,614 82	
		206,143 03
River Parkway, Section H.		
Construction account	13,135 30	13,135 30
Cambridge Field.		
Construction account	127,062 72	
Land account	78,884 85	
		205,947 57
East Cambridge Embankment.		
Construction account	87,498 88	
Land account	45,231 40	
		132,730 28
General Account.		
Construction account	42,260 11	42,260 11
Rindge Field.		
Construction account	9,230 99	
Land account	31,461 85	
		40,692 84
Office Expenses.		
Construction account	12,677 85	12,677 85
Broadway Park.		
Construction account	11,308 65	11,308 65
Nursery.		
Construction account	6,161 19	6,161 19
Hastings Square.		
Construction account	2,683 07	2,683 07
Winthrop Square.		
Construction account	1,866 26	1,866 26
Washington Elm.		
Construction account	466 98	466 98
Porter Square.		
Construction account	20 87	20 87
		$1,359,391 77
Less Park revenue for 1894 and 1896 merged into land and construction accounts		4,494 39
		$1,354,897 38

Of the whole amount of Park Loans expended to December 1, 1902, 36 per cent. has been for land and 64 per cent. for construction, as follows : —

Land account (less "revenues")	$488,891 05
Construction account	866,006 33
	$1,354,897 38

Respectfully submitted,

GEO. HOWLAND COX,
WILLIAM M. RICHARDSON,
EDMUND REARDON,
} *Park Commissioners.*

REPORT OF THE GENERAL SUPERINTENDENT OF PARKS

CAMBRIDGE, December 1, 1902.

To the Board of Park Commissioners of the City of Cambridge :—

GENTLEMEN :—I herewith present the annual report of the General Superintendent of Parks for the financial year 1902.

RIVER PARKWAY.

Upon the acquirement last year of the portion between Western Avenue and River Street the original plan of taking for the Parkway was completed, and with the exception of perhaps one or two changes in the Harbor Commissioners' Line, no additional taking will be necessary between the Park land of the State at Gerry's Landing and the new south line of Main Street, a distance, measured on the centre line of the driveway, of about four miles.

The total area of the Parkway at present is 113.66 acres; this includes a portion of the river bottom beyond the line of mean low water.

The lines dividing Sections A and B, and B and C, have been changed slightly from those given in the report of 1898. The work of construction and maintenance on the different sections and on the commons, squares etc., has been carried on as follows :—

SECTION A.

(Area 9.07 acres.)

Section A extends from the South line of Main Street as widened for the approach to the new bridge, to the west line of the third street east of Massachusetts Avenue.

Eight Welsbach lights have been maintained here during the year. The necessary attention has been given the trees. The easterly end of the section is settling somewhat, carrying with it the trees and finished roadway, making it necessary to fill some of the worst places in the road. This roadway will have to be brought up to grade and resurfaced for a portion of its length when the outer driveway is surfaced and the lawns are completed.

The life ladders on the sea wall should be cleaned and painted at once.

SECTION B.

(Area 19.72 acres.)

Section B extends from the west line of the third street east of Massachusetts Avenue to the west line of the fourth street west of the avenue, but does not include Massachusetts Avenue.

Four men have been employed here the greater part of the season.

The section was maintained in a very satisfactory condition.

Six settees were placed on the outer walk next the river on the portion west of the bridge.

The shrubbery is in excellent condition as also are the trees with the exception of the row next the sea wall. When the wall was ballasted in 1900 the excavated material was piled in such a position as to bury the tree trunks to a considerable depth, this material coming from the back of the sea wall was naturally impregnated with salt. Their somewhat weak condition is accounted for perhaps by the above-mentioned facts.

The fence on the sea wall between the bridge and the second street west, about 1,140 feet in length, should be cleaned and painted at once, as also should the life ladders; one of the ladders which had been injured by floating ice has been removed and repaired.

Thirty-one Welsbach lights have been maintained here during the year. The number of lights west of Massachusetts Avenue seem quite enough for lighting that portion but the number on the portion east of the avenue and the lighting on Section B is not sufficient; posts are in position here to double the number and this should be done as soon as practicable.

The walks east of Massachusetts Avenue should be surfaced, the fifteen foot walk next the property line is continuous between the avenue and Main Street and therefore most used at present; its sandy condition obliges pedestrians to walk on the edge of the lawn, resulting in the destruction of the grass.

The roadways on either side of the third lawn west of Massachusetts Avenue should be surfaced with gravel.

There remains on this section to be built about 357 feet of sea wall in completion of the proposed plan. The only work required on the wall built by the Embankment Company will be the ballasting and resetting the cap-stone of about 396 feet and the rebuilding and ballasting of about 48 feet of wall at the westerly end; also the filling of a part of the fourth lawn west of Massachusetts Avenue, completing the lawn and surfacing the roadways and walks, and planting shrubbery on the third lawn east and the third and fourth lawns west of the avenue. The construction of the

paths in the central lawns should be carried out as recommended in the report of 1900. Considerable expense would be saved if this work were done on the remaining lawns at the same time they are graded.

SECTION C.

(Area 13.39 acres.)

Section C extends from the west line of the fourth street west of Massachusetts Avenue to the east line of Brookline Street, but does not include the right of way of the Grand Junction Railroad.

The roadway is now continuous along this section, but is not yet in a suitable condition for travel; 2,836 cubic yards of cinders and 820 loads of filling and gravel have been placed here at a cost of $956.67, seventy dollars of which was the cost of teaming, nothing being paid for the material teamed. The roadway at present is at about elevation 18.6, some settlement having taken place by reason of the drying out of the dredged material underneath the filling of ashes and dirt.

No further movement of the bulkhead has taken place. There has been placed outside and against the bulkhead for a distance of 475 feet easterly from the Grand Junction Railroad bridge and at a point opposite Henry Street heavy stone and ballast from the old wharves at Section F.

The weight of the stone in this position will help to overcome the thrust of the high embankment that will be required as an approach to the proposed bridge over the railroad.

SECTION D.

(Area 38.31 acres.)

Section D extends from the west line of Brookline Street to the south line of River Street.

The principal work of construction has been the surfacing of the driveway with macadam between Magazine and Brookline Streets and on Magazine Street between Granite Street and the Park Road; the grading and seeding of the planting strips either side of the roadway between Magazine and Brookline Streets and the building and placing of fourteen wooden box drains to remove surface water from the same piece of road.

The full width of thirty-three and one-third feet between the curb lines on Magazine Street and thirty feet of the forty-foot wide park driveway was surfaced to a depth at the centre of four and three-quarter inches and of two inches at the sides.

The total area of the macadam is 5,366 square yards.

In connection with the surfacing of the driveway and grading the tree strips, about 300 cubic yards of gravel and filling were used at a cost

of $183.28. Five hundred and seven cubic yards of loam were placed in the tree strips for which seventy-five cents per cubic yard was paid.

The dyke along the river bank east of Magazine Street had settled so that at several points the highest tides were flowing over it; these low portions have been restored to elevation 19.00; considerable gravel was also placed by the Metropolitan Water Works Commission over their pipes where the filling had settled and been washed out.

At the Bath House the usual force of clerks and assistants, together with two life guards and a police officer, have been on duty each day from June 14 to September 14, between the hours of nine A.M. and ten P.M., with the exception of three hours at low tide. It was estimated that 29,700 bathers used the beach during this period. The season has not been favorable for bathing, the water being cold and the weather disagreeable.

The total receipts from suits, towels and lockers amounted to $863.06.

The laundering has been done by a local laundry at a cost of fifteen cents per dozen for the suits, and one cent each for the towels.

An additional float has been constructed, using parts of one of the old floats. The new float is 23.6 feet by 17.3 feet; the float built last year is 30 feet by 18 feet.

Considerable mud has been deposited at the foot of the beach by reason of its re-entrant form; this condition could be remedied by filling over the mud in the hollow and making the water line of the beach straight.

The upper part of the beach has settled where the fill was made in a large creek; this should be brought up to grade at the same time the foot of the beach is refilled.

It has become still more apparent the past season that the proposed new bath house, together with its laundry arrangements, should be built at once, in order to carry on the work here to the best advantage and to the larger use of the beach.

Pleasant Street extension has been surfaced with gravel and rolled by the Street Department; the walk back of the bath house should be extended next season along the river bank to connect with this work, and if possible to River Street. The fill could be made this winter with City ashes; the line of the walk as far as Pleasant Street is already filled with dredged material nearly to grade; this would make the bathing beach more accessible to that portion of the City just north of River Street and to the East Cambridge cars.

More of the large playground east of Magazine Street should be graded; to make this practicable and to keep the ground dry, a permanent tide gate will have to be built in the Pearl Street sewer in the line of the dyke.

Requests have been made for tennis courts at Captain's Island; such courts could be constructed after the tide gate is in place, and with a slight amount of filling, on the land north of the driveway, east and west of Pearl Street.

Pearl Street is in a somewhat dangerous condition and should be filled to grade and surfaced.

A tide gate and outlet is also required for the drainage of the small playgrounds west of Magazine Street. The site of this outlet is just north of the proposed bath house at the point where the large cut has been made through the filling. The present construction of this tide gate would shut out the water from, and dry the marsh, making it better suited to sustain the heavy fill of the roadway when made.

The construction of the little children's playground should be carried out as recommended last year.

The walks on either side of the driveway between Brookline and Magazine Streets require to be filled to grade and surfaced.

Twenty-nine Welsbach lights have been maintained here, eighteen on the driveway and eleven on the Island, together with three arc lights on the beach during the bathing season.

SECTION E.

(Area 1.77 acres.)

Section E extends from the north line of River Street to south line of Western Avenue.

No construction work has been done here during the year.

The guard fences at the River Street bridge have been repaired and line and grade given for a fence along the park line adjacent to the land deeded to the Riverside Press.

The small sewers that formerly discharged into the river from the Press buildings were connected on August 26th with the sewer in Blackstone Street.

There is still a large amount of grease discharged into the river from the engines of the Electric Light Company's plant.

On recommendation of the Commission an order was adopted by the City Council May 13th conveying back to the Electric Light Company forty-seven square feet of land at the southeast corner of Western Avenue and the park road. A curve of ten feet radius has been substituted here for one of twenty feet radius to allow more room for the new station which was built very close to the line at this point.

A plan on a scale of forty feet to the inch has been made by the engineers showing the Cambridge park lands, the park lands of the State on the Boston shore and cross-sections of the river at intervals of one

hundred feet, extending the whole length of Section E, south on Section D to the Bathing Beach, and north on Section F to Otter Street, a total distance of 4,200 feet.

The wharf at River Street has been used on two different occasions for discharging cargoes from vessels.

SECTION F.

(Area 13.89 acres.)

Section F extends from the north line of Western Avenue to the east line of Boylston Street.

The principal construction work of the season has been performed here. Work under the contract for removing the old sea walls made with Augustus Bellevue & Co. in October, 1901, was discontinued on December 9, 1901, after removing 2,396 tons of stone. The time of completion was extended to May 1, 1902, but the contractor did not resume operations.

A contract was made on June 23, 1902, with the Eastern Dredging Company to remove the remainder of the walls, estimated to be about 1,900 tons, and to pull the piles outside the walls; this contract was discontinued before completion because of a lack of funds.

The best of the stone from the walls and those of the piles that could be used again, were deposited on the sea wall at the west end of Section B to be used in extending that wall; the remainder of the stone was used as described at Section C.

During April and May contracts were made for 4,400 cubic yards of loam at eighty cents and eighty-seven cents per cubic yard, delivered in carts; 3,593.5 cubic yards were delivered under these contracts.

The tree strips have been extended from the end of the construction of 1898, the one on the northerly side of the driveway to DeWolf Street, and the southerly strip to Flagg Street. Planes (Platanus orientalis, twelve trees) were planted as far as Holyoke Street; the remainder of the distance on both sides as far as the loam was in place, oaks (Quercus rubra, forty-four trees) were planted. The lawns between the driveway and Riverview Avenue were graded and seeded, and shrubbery planted. Some shrubbery was also planted at the top of beach just east of the boat house.

For this work a total of about 3,840 cubic yards of loam, at a cost of $3,194.28, was used.

The docks either side of Richardson and Bacon's wharf were partly filled with City ashes and partly with material removed from the outer end of the wharf, and the roadway brought to sub-grade for a length of 970 feet, in continuation of previous work.

In June, a contract was made for 2,500 cubic yards of binding gravel at 85 cents per cubic yard, to be used for surfacing the roadway between Boylston and DeWolf Streets, a distance of about 1,500 feet. Under this contract, 2,053.3 cubic yards of gravel were delivered, placed in the road and rolled with section and steam rollers.

A watering system has been installed extending through the entire area completed this season; 825 feet of two-inch galvanized pipe were laid from the City main in Boylston Street, along the south side of the driveway to opposite Holyoke Street; this will eventually connect with the main in Riverview Avenue to give circulation; 676 feet of one-inch pipe, and 470 feet of three-quarter-inch pipe were used to connect the hydrants with the two inch pipe and with the mains in Riverview Avenue and DeWolf Street. Twelve garden hydrants were set.

Ten large and five small catch basins were built, and 775 lineal feet of eight-inch Akron, and 60 feet of eight-inch iron pipe were laid in connection therewith.

Of edgestone, 611.6 lineal feet of straight, and 9.97 feet of curved, were set on the south side of Riverview Avenue and on the west side of DeWolf Street; and 25.24 feet of straight, and 217.44 feet of curved edgestone, at the entrance of Plympton and DeWolf Streets into the Park Road.

Holyoke Street enters the park over the filling placed in the dock east of Richardson and Bacon's wharf. This filling, as well as the fill in the dock just west of the same wharf, has settled considerably, and will settle more and require refilling; for this reason the catch basins were not built nor the edgestone set at Holyoke Street. The surface water can be taken care of at this point by means of wooden box drains until the filling has fully subsided.

On August 15th, fifteen Welsbach lights were installed and have since been maintained, making a total on the section of seventeen.

The shrubbery and lawns west of the boat house have been maintained the greater part of the year in connection with the work on Section G and are in excellent condition.

The fence on the bulkhead at the boat house has been painted.

After the necessary arrangements have been made for construction in DeWolf Street very little labor or material will be required to extend the roadway, walks and tree space to Flagg Street.

About 10,000 loads of filling, consisting of excavation from cellars, ashes, street scrapings and City ashes, have been received, for which $2,245.42 has been paid.

With the exception of a stretch of flats about 300 feet in length opposite Sands Street, the fill is now continuous between Flagg Street

and Western Avenue, but not to subgrade nor to a width greater than will be required for the fifteen-foot walk and one row of trees. It is expected that the short section of flats will be filled the coming winter with City ashes.

To complete the work undertaken this season there remains considerable material to be removed from the Stickney Wharf, a part of the wall and the filling to be removed from the Sargent Wharf, and some dredging to be done between the wharves. The beach just east of the boat house will have to be graded and gravel furnished for surfacing the beach easterly from the present work.

The tree strips just east of Boylston Street should be regraded where they have settled, the walk next the property line surfaced between Boylston and Holyoke Streets, and the walk surfaced and loam placed along the top of the beach.

SECTION G.

(Area 16.07 acres.)

Section G extends from the west line of Boylston Street to the east line of the land of the Stillman Infirmary.

Thirty-three Welsbach lights have been maintained here during the year.

Four men have been employed during most of the season in caring for the section.

The iron fences at the top of the beach west of Boylston Street and along Mount Auburn Street have been painted.

The division fence at the Stillman Infirmary was regraded and painted.

The grading of Section G was completed in 1897, some settled portions were regraded in 1898, since which time considerable additional settlement has taken place on different parts of the section, the greatest subsidence having occurred in the lawn and roadway between Boylston and Murray Streets. The catch basins were cut down to meet the changed conditions; in the case of the lawn to such an extent that the sea water flows over the grass at extreme tides, and has apparently reached and killed some of the shrubbery. To remedy this state of affairs either a tide gate should be placed in the outlet of the drain or the area filled to its former elevation.

If the water in the river is to be kept at a constant height by means of a dam, it would not be necessary to do any very extensive regrading except in the roadway where inequalities have occurred in the settlement.

Some repairs will be required along the beach another season.

SECTION H.

(Area 1.44 acres.)

Section H extends from the east line of the land of the Stillman Infirmary to the Metropolitan Park taking at Gerry's Landing.

The iron fence along the park line from Gerry's Landing to Section G and connecting with the division fence at the Infirmary has been completed and painted.

The section was maintained in connection with the work on Section G.

Some gravel is needed here to regrade the walk and also a small amount of loam to finish the lawn at its westerly end.

The beach which was built in 1900 has a slope of one on four and a half, and though in a position exposed to strong currents and the action of the ice is in a most satisfactory condition.

CAMBRIDGE FIELD.

(Area 12.64 acres.)

The running track has been surfaced with coke dust, sixty-four tons being used at a cost of $1.50 per ton; screened loam was used as a binder for the coke dust.

There is still considerable regrading to be done on the paths outside the running track and in front of the band stand. All the macadam walks on the field should receive a surfacing of stone dust.

The shrubbery at the sides and especially the back of the playfield has gotten into a very bad condition; the trees have grown sufficiently to shade it and the boys make paths through it. Some sort of permanent protection will have to be provided here.

The electric light wires should be placed underground; they are beginning to interfere with the growing tree tops.

Preliminary sketches were made for a locker room and shower baths under the band stand and for a permanent covering over the sand courts.

The lockers and shower baths are very much needed in connection with the running track and games on the field.

Some repairs are needed in the plumbing of the shelter and in the drains from the field.

Three men have been employed in the care of the lawns, walks and shrubbery.

About 24,800 people enjoyed the ice during the skating season of forty-three days.

RINDGE FIELD AND NURSERY.

(Area 11.52 acres.)

Four sand courts and two giant strides have been built by the department, and two swings, a sand court and six tilts by the Cambridge-Somer-

ville Playground Committee. This committee also provided the paraphernalia for football, baseball, basket ball and other games, also an instructor to direct the children in their play, a portion of the cost of which was borne by the department.

The trees and shrubs in the Nursery are in excellent condition; some of the trees, as the oaks, will soon be too large to transplant successfully; it would be well either to sell or use them in the coming season's planting.

One man has been constantly employed caring for the Nursery and the lawn at the Sleeper School.

EAST CAMBRIDGE EMBANKMENT.

(Area, 8.35 acres.)

No construction work has been performed here this year.

Considerable filling has been placed without expense to the City.

Ballast should be placed back of the wall to protect it and allow the work of filling to continue.

COMMONS, SQUARES AND PUBLIC GROUNDS.

The usual attention has been given to the care of the different commons and squares and to the grounds in charge of the department, around public buildings.

Plans were prepared for laying out the lawns and walks around the new Washington School. The work of grading was performed by the contractor for the building.

Estimates were prepared, based on a plan by Olmsted Brothers, for construction at Porter Square. No work was done there however.

The iron fences around several of the squares and public buildings need repairing and painting.

The relocation of walks and planting at the Library should be completed. There also remains a small amount of grading and planting to be done on the Ellery Street side of the Latin School Grounds.

The work of transporting and erecting the Charles Sumner statue which had been presented to the City, was intrusted to this department. The site chosen is the small common east of Massachusetts Avenue between Cambridge and Kirkland Streets. A contract was made with Alexander McDonald & Son, of Cambridge, to transport and erect the pedestal and statue; the foundation of solid concrete, four feet in depth, was placed by the Park Department; the necessary grading around the statue was also done by this department. Payment for the work was made from the Contingent Fund by an order of the City Council approved November 13, 1902.

WASHINGTON ELM.

In July, 1899, an area, including the curbing, of 886 square feet was enclosed and loamed to a depth of one foot around the Elm. Of this area about 740 square feet is turf. The turf has been renewed and the old wounds on the tree have been scraped and retarred.

The foliage was very full and healthful the past summer, new wood is making, and the small roots and fibres have filled the loam through its entire extent.

SHADE TREES.

A systematic cleaning of the nests of the Brown-tail Moth from the street trees, the trees in the commons and squares, and to a considerable extent, in private estates, was made early in the year, with the result that less injury has been done the foliage, and fewer complaints have been received from people annoyed by the caterpillars.

A careful examination, however, of all the street trees in the City discloses the fact that the ravages of the Tussock Moth in the eastern and central, and the Gypsy Moth in the western and central portions of the City, are becoming almost as serious as that of the Brown-tail Moth.

Two broods of the Tussock Moth were hatched this year.

Two colonies at least of the Elm-leaf Beetle are spreading rapidly.

Some work is being done at present in destroying the nests of the Brown-tail Moth. The egg clusters of Gypsy and Tussock Moths are at present to be found on the limbs and trunks of trees, on buildings and fences, and hidden away in numerous other places, and can be removed and burned or destroyed by painting with creosote oil, to which a little turpentine or tar has been added; this can be done most effectively during the winter months.

The Brown-tail Moth is at present (December) hibernating in the larval state in nests formed of dry leaves on the small twigs at the ends of the branches of nearly all our trees and shrubs, but more particularly on the pear trees. The most effectual method of destroying this insect is to remove and burn the nests. This should also be done during the winter, while the nests are easily discernible.

The most effective method of destroying the Elm-leaf Beetle is by spraying when in the larval state. This is also efficacious in destroying the very young Brown-tail, Gypsy and Tussock caterpillars.

To do this spraying the department should have larger apparatus than it possesses at present. Copies of two acts relative to the above-mentioned pests are given at the end of the report.

It has been possible this year, besides attending to requests for miscellaneous trimming and removal of trees on petition, to remove many trees that were dead and dangerous and trim trees on several miles of main thoroughfares and residential streets.

Following is a list of streets on which the trees have been systematically trimmed: —

Massachusetts Ave., from Douglass St. to Cambridge Sta.	309	trees
Brattle Street	234	"
Magazine Street	191	"
Harvard Street, from Quincy Street to Norfolk Street	174	"
Craigie Street	60	"
Washington Avenue	38	"
Lancaster Street	35	"
Hillside Avenue	9	"
Total	1,050	trees

On these streets are to be found some of the largest and oldest trees in the City. The average cost of trimming has been about fifty-five cents per tree. There is no doubt about the advantage and economy of this method of trimming over that of trimming a tree here and there in widely separated sections of the City, and perhaps not more than six trees in a day's work with results very unsatisfactory at the best.

In addition to the work described above there have been

794 wire guards repaired.
644 trees trimmed (total 1,694).
201 new wire guards put on.
15 trees restaked.

Trees planted (including replacing of dead trees), as follows: —

Acer platanoides	108
Ulmus Americana	35
Fraxinus Americana	11
Quercus rubra	8
Fagus purpurea	2
Acer dasycarpum	1
Acer saccharum	1
Total	166

Trees removed, as follows : —

Ulmus Americana	94
Acer saccharum	57
Æsculus hippocastanum	15
Fraxinus Americana	11
Acer platanoides	3
Tilia Americana	3
Acer dasycarpum	3
Ulmus campestris	2
Acer rubrum	1
Robinia	1
Salix alba	1
Total	191
Stumps removed	50
Heads cut off	11
Trees sprayed	775

THE YEAR'S EXPENDITURES.

The expenses of the department for the year are shown in the following summary of the departmental accounts :—

PARK LOANS.

(*Lands and Construction.*)

Amount of unused balance of 1901 appropriation reappropriated December 19, 1901			$6,322 89
Amount appropriated March 27, 1902			50,000 00
			$56,322 89
EXPENDED.			
River Parkway, Section A.			
Engineering	$62 75		
Pay roll	25 34		
Teaming	1 50		
Lettering sign	1 00		
		$90 59	
River Parkway, Section B.			
Pay roll	$2,307 67		
Shrubs	170 70		
Laying artificial stone sidewalk	137 20		
Engineering	55 38		
Lawn seats	22 20		
Amounts carried forward	$2,693 15	$90 59	$56,322 89

Amounts brought forward	$2,693 15	$90 59	$56,322 89
Repairing iron fence on sea wall	16 00		
Freight and express	3 82		
Blacksmithing	3 05		
Hardware	35		
Shingles for engineers	35		
		$2,716 72	
River Parkway, Section C.			
Lands	$20,352 34		
Pay roll	825 48		
Cinders	709 04		
Lumber and spikes for drains	152 71		
Teaming	150 00		
Engineering	147 14		
Filling	136 50		
Gravel	41 13		
Lumber	22 01		
Constructing crossing — B. & A. R. R.	11 30		
Recording license, deed, etc.	4 89		
Hardware	2 18		
Express	45		
		$22,555 17	
River Parkway, Section D.			
Pay roll	$2,310 30		
Cracked stone	1,332 17		
Engineering	646 90		
Loam	380 22		
Use of steam roller	313 00		
Teaming	305 64		
Gravel	157 47		
Lumber	78 47		
Stakes for engineers	19 45		
Filling	17 75		
Demurrage	9 00		
Hardware	8 14		
Sand	8 06		
Plumbing	2 65		
Turning water off and on	1 00		
		$5,590 22	
River Parkway, Section E.			
Engineering	$455 25		
Lumber	4 20		
		$459 45	
River Parkway, Section F.			
Pay roll	$5,539 96		
Loam	3,194 28		
Filling	2,041 12		
Gravel	1,771 00		
Engineering	1,225 84		
Amounts carried forward	$13,772 20	$31,412 15	$56,322 89

Amounts brought forward	$13,772 20	$31,412 15	$56,322 89
Edgestone	539 72		
Drainage system	467 68		
Watering system	421 92		
Removing stone from wharves	400 00		
Teaming	266 20		
Ashes	204 30		
Sod	150 00		
Shrubs	139 99		
Lumber	112 35		
Pulling piles	110 00		
Use of steam roller	31 50		
Printing and advertising	30 95		
Repairing gutter on Weld Boat House	23 39		
Tools and hardware	22 85		
Painting iron fence	12 00		
Bound posts	12 00		
Freight and express	9 98		
Stakes for engineers	9 20		
Grass seed	7 16		
Expenses of City Solicitor	7 00		
Signs	4 42		
Kerosene oil	4 25		
Sharpening picks	1 00		
Coal	30		
		$16,760 36	
River Parkway, Section H			
Iron fence	$761 67		
Pay roll	53 25		
Grading and setting up old iron fence	44 60		
Engineering	19 50		
Bound posts	8 00		
		$887 02	
Nursery.			
Pay roll	$697 00		
Tarred paper	2 85		
Coal	2 45		
Hardware	1 09		
		$703 39	
Rindge Field.			
Pay roll	$316 80		
Apparatus for playground	50 00		
Teaming	3 00		
		$369 80	
Cambridge Field.			
Pay roll	$117 50		
Coke	96 02		
Engineering	52 87		
Screened loam	52 50		
Teaming	44 63		
		$363 52	
Amounts carried forward		$50,496 24	$56,322 89

Amounts brought forward		$50,496 24	$56,322 89
Porter Square.			
Engineering	$10 37		
		$10 37	
East Cambridge Embankment.			
Engineering	$3 62		
Filling	30		
		$3 92	
General Account.			
General Superintendent's salary . .	$1,166 64		
Landscape Architect's fees . . .	888 77		
Acting General Superintendent's salary .	524 00		
Damages for personal injuries . . .	400 00		
Board of horse, carriage hire, etc. . .	312 65		
Heliotype cuts for report of 1901 . .	126 00		
Rent of store room	110 00		
Car tickets for engineers	100 00		
Printing and binding reports of 1901 .	76 12		
Repairing carriage	62 00		
Car tickets for office	50 00		
Shoeing horse	31 00		
Photographs and photographic materials	25 91		
Tools and hardware	25 03		
Entertaining N. E. Ass'n of Park Supts. .	21 70		
Printing	19 25		
Repairing bicycle	14 95		
Grass seed	14 32		
Rubber boots, etc.	13 82		
Stakes for engineers	12 00		
Blacksmithing	11 80		
Repairing roller	5 50		
Carpentering	3 96		
Repairing engineers' transit . . .	3 00		
Plumbing	2 07		
Express	1 75		
		$4,022 24	
Office Expenses.			
Pay roll	$690 00		
Telephone service	112 20		
Stationery and printing	105 51		
Postage stamps	35 00		
"Pay roll" and "Record" books . .	19 00		
"Revised Laws"	6 00		
Weekly time cards	6 00		
Encyclopaedia of Horticulture . .	5 00		
Hardware	4 50		
Globe-Wernicke case	4 00		
Directory	3 00		
Amounts carried forward	$990 21	$54,532 77	$56,322 89

Amounts brought forward	$990 21	$54,532 77	$56,322 89
Letter copying and memorandum books	2 65		
Typewriter supplies	1 75		
Rubber stamp	1 31		
Express	25		
		$996 17	
Total			$55,528 94
Balance unexpended			$793 95

PARK MAINTENANCE.

Shade Trees.

Amount appropriated April 17, 1902		$5,500 00
Amount transferred from commons, squares and public grounds October 22, 1902		550 00
Amount transferred from bath house October 22, 1902		200 00
		$6,250 00

EXPENDED.

Pay roll	$5,110 79	
Teaming	522 14	
Wire and wire netting	239 10	
Disparene	63 00	
Tools and hardware	45 36	
Tree poles	35 00	
Sharpening saws	31 60	
Rope	30 74	
Loam	25 92	
Repairing damage done by trees	23 93	
Raising stump of tree	16 00	
Repairs	14 50	
Spraying	9 17	
Staples	8 50	
Printing tree notices	8 25	
Lumber	7 23	
Express	5 05	
Hose for tying trees	4 78	
Creosote	4 75	
Filling	2 75	
Kerosene oil	1 10	
Lime	90	
Total		$6,210 56
Balance unexpended		$39 44

Cambridge Field and Shelter.

Amount appropriated April 17, 1902	$4,500 00
Amount appropriated May 15, 1902	650 00
	$5,150 00
Amount carried forward	$5,150 00

Amount brought forward		$5,150 00
EXPENDED.		
Pay roll	$3,836 97	
Lighting	824 00	
Coal	246 50	
Telephone service	88 40	
Rope mats	18 90	
Toilet paper	18 00	
Repairing drinking fountain	16 25	
Teaming	14 46	
Laundering towels	11 54	
Miscellaneous supplies	10 05	
Trousers for Superintendent	6 00	
Sand	4 83	
Hardware	4 29	
Miscellaneous repairs	4 03	
Lumber	3 00	
Repairing furnace	2 50	
Engineering	1 50	
Express	75	
Total		$5,111 97
Balance unexpended		$38 03

Commons, Squares and Public Grounds.

Amount appropriated April 17, 1902		$5,600 00
Amount transferred to shade trees Oct. 22, 1902		550 00
		$5,050 00
EXPENDED.		
Pay roll	$4,136 73	
Lighting	390 00	
Lumber	125 24	
Teaming	83 67	
Painting fence at Fort Washington	65 00	
Assorted plants	62 00	
Lawn mowers	61 56	
Bulbs	38 05	
Sod	22 20	
Tools and hardware	19 49	
Flag and repairing	13 62	
Removing skeleton from flag staff	10 00	
Manure	6 00	
Loam	5 67	
Engineering	4 00	
Turning water off and on	1 00	
Repairing drinking fountain	1 00	
Express	30	
Total		$5,045 53
Balance unexpended		$4 47

Brown Tail Moth Extermination.

Amount appropriated January 23, 1902		$1,500 00
Amount appropriated February 19, 1902		1,500 00
Amount appropriated March 21, 1902		1,500 00
Amount appropriated April 10, 1902		300 00
		$4,800 00
EXPENDED.		
Pay roll	$4,485 14	
Teaming	123 75	
Use of tools, ladders, horse and team	108 21	
Printing and stock	37 50	
Disparene	15 00	
Advertising	14 85	
Tools and hardware	13 31	
Setting glass	1 15	
Express	15	
Total		$4,799 06
Balance unexpended		$0 94

Section G.

Amount appropriated April 17, 1902		$3,000 00
EXPENDED.		
Pay roll	$1,793 55	
Lighting	1,029 52	
Painting iron fence	88 00	
Engineering	29 01	
Hardware	76	
Teaming	63	
Total		$2,941 47
Balance unexpended		$58 53

Sections A, B, D, F and Rindge Field

Amount appropriated April 17, 1902		$2,500 00
EXPENDED.		
Section A.		
Lighting	$220 39	
Section B.		
Lighting	1,007 52	
Section D.		
Lighting	775 89	
Section F.		
Lighting	162 20	
Amounts carried forward	$2,166 00	$2,500 00

Amounts brought forward	$2,166 00	$2,500 00
Rindge Field.		
Lighting	268 20	
Total		$2,434 20
Balance unexpended		$65 80
Bath House.		
Amount appropriated April 17, 1902		$2,500 00
Amount transferred to shade trees October 22, 1902		200 00
		$2,300 00
EXPENDED.		
Pay roll	$1,738 19	
Lighting	170 80	
Laundering suits and towels	139 49	
Rope	49 68	
Tags for bathing suits	30 00	
Telephone service	27 77	
Garden hose	27 00	
Printing and stock	26 50	
Lumber	26 13	
Hardware	22 92	
Miscellaneous supplies	9 91	
Stakes for engineers	9 00	
Cleaning vault	5 00	
Oars and rowlocks	2 94	
Repairing shower bath	2 80	
Plumbing	2 20	
Blacksmithing	50	
Extra help	50	
Express	40	
Repairing lock	25	
Total		$2,291 98
Balance unexpended		$8 02
General Account.		
Amount appropriated April 17, 1902		$400 00
EXPENDED.		
Board of horse and use of room	$255 00	
Tools and hardware	68 97	
Repairing bicycles	20 65	
Shoeing horse	14 70	
Grass seed	14 32	
Blankets	12 66	
Wicks and kerosene oil	6 10	
Amounts carried forward	$392 40	$400 00

Amounts brought forward	$392 40	$400 00
Express	2 55	
Paint	2 00	
Police belt	1 50	
Diary for officer	83	
Total		$399 28
Balance unexpended		$0 72

Here follows a table setting forth the work performed during the year under contracts made by the department.

All of which is respectfully submitted,

J. ALBERT HOLMES,
Acting General Superintendent of Parks.

CONTRACTS MADE DURING THE YEAR 1902.

Number of Contract.	WORK.	Number of bids.	Lowest bid.	CONTRACTOR.	Date of Contract.	Date for completion of Contract.	Contract completed.	Amount of Work Performed.	Amount of Contract.
72	Iron fence ..... River Parkway, Sec. H	1	$1.45 per foot.	Van Dorn Iron Works Co., A. Simpson, agent, Cambridge.	March 29, 1902.	May 15, 1902.	June 9, 1902.	525.29 feet erected	$761 67
73	Furnish 700 cu. yds. loam River Parkway, Sec. F	3	80c. per cu.yd.	Jeremiah Sullivan, Cambridge.	April 7, 1902.	April 26, 1902.	April 21, 1902.	700 cubic yards delivered..	560 00
74	Furnish 1,700 cu.yds.loam River Parkway. Sec. F	4	87c. per cu.yd.	Jeremiah Sullivan, Cambridge.	May 10, 1902.	May 24, 1902.	July 1, 1902.	1,353.1 cubic yds. delivered	1,177 18
75	Furnish 1,000 cu.yds loam River Parkway, Sec. F	4	87c. per cu.yd.	M. O'Sullivan, Cambridge.	May 10, 1902.	May 24, 1902.	June 13, 1902.	1,181.2 cubic yds. delivered	1,027 63
76	Furnish 1,000 cu.yds.loam River Parkway, Sec. F	4	87c. per cu.yd.	W. J. McCarthy, Somerville	May 10, 1902.	May 24, 1902.	May 21, 1902.	359.2 cubic yds. delivered..	312 49
77	Fur'sh 2,500 cu yds.gravel River Parkway, Sec. F	2	85c. per cu.yd.	John O'Brien, Allston.....	June 4, 1902.	*July 19, 1902.	Aug. 15, 1902.	2,053.3 cubic yds. delivered	1,745 30
78	Remove sea walls..... " piles..... " sheet piles..... River Parkway, Sec F	6	80c. per ton... $1.10 per pile. 1.00 per pile.	Eastern Dredging Co., Boston.	June 23, 1902.	July 15, 1902.	July 7, 1902.	1,562.3 tons removed..... 132 piles removed ..... 7 sheet piles removed	1,402 04
79	Laundering bathing suits Bath house, Captain's Island.	3	15c. per doz. suits; $1 00 per hundred towels.	Monk's Custom Laundry, Cambridge.	Aug. 8, 1902.	†Sept. 8, 1902.	Sept. 15, 1902.	361 17-24 doz. suits laund'd 8,975 towels laundred	139 49
	Total.....	.....	.....	.....	.....	.....	.....	.....	$7,125 80

* Time extended to August 16, 1902. † Monthly contract.

REPORT OF THE LANDSCAPE ARCHITECTS

Brookline, Mass., December 1, 1902.

Mr. George Howland Cox, Chairman Cambridge Park Commission, City Hall, Cambridge: —

Dear Sir: — In accordance with our custom, we submit the following report concerning matters of design which have engaged our attention during the year ending November 30, 1902.

The most important plan which we prepared during the year was intended to illustrate our advice that your Commission should endeavor to secure a revision of the pier and bulkhead line on the Cambridge side of the Charles River from Akron Street (above Western Avenue) to River Street, for the purpose of carrying the Parkway with its full width past the Riverside Press works and the new buildings of the Cambridge Electric Light Company.

The regular width of the Parkway is ninety feet, with twenty feet additional to the building limit restriction line, but in front of these properties the width was reduced to seventy-five feet with no building limit line. This will compel the omission of the sidewalk next the private property frontage and brick buildings already press almost to the proposed curb line. Such a break in the sidewalk and encroachment upon the regularity of what is destined to be one of the handsomest and most stately parkways in the country, is certainly liable to be called a bad botch. In fact at the time it was determined upon it was recognized as such and it was distinctly understood to be temporary. As regards the frontage of the Riverside Press it might still be so regarded, but since the boundary was established the Cambridge Electric Light Company have erected an unusually massive and costly power house so close to the line as to make the idea of eventually widening the Parkway to the proper boundary line and of obtaining the building limit line seem utterly hopeless. Under these circumstances our suggestion that the legal lines limiting constructions along both sides of the river be shifted as much as may be necessary before any further constructions on the other side of the river prevent, seems the only reasonable solution of this important problem. By relocating the Parkway so the boundary will be twenty feet from the nearest corners of the two adjoining buildings of the

Cambridge Electric Light Company, the maximum change required in the pier and bulkhead line which was established by the United States engineer in charge of Boston Harbor, would be only twenty-six feet. This change would doubtless require the bulkhead line on the other side of the river to be shifted shoreward to the same extent. Were the other shore owned by private individuals or corporations having expensive improvements the cost of the suggested change might be prohibitory, but fortunately the opposite shore from Cambridge is owned by the Metropolitan Park Commission to a considerably greater width than is required for the essential constructive features of the Parkway for which that shore was taken. Consequently there seem to be no physical difficulties in the way of the proposed solution of the problem of getting the Parkway on the Cambridge side past the Electric Light buildings full width and with the needed building limit restriction line. The change will require the assent of the United States engineer in charge of Boston Harbor and of his superiors, the approval of the Massachusetts State Land and Harbor Commission and the consent of the Metropolitan Park Commission. In addition the building restriction will have to be taken on the Cambridge side where it has not been taken and relocated where it has already been settled and some readjustments of the boundary may have to be made.

Another plan which we made during the year was to show a revision in the location of the towers proposed by the architects of the new Cambridge bridge. Although this matter was not strictly under the jurisdiction of your Commission, yet as it affected the improvement of the Esplanade, it was properly brought to your attention.

We prepared a detailed planting plan and list of plants for part of Section F of Charles River Parkway from Boylston Street to Flagg Street, a distance of about two thousand feet. In addition to the two regular rows of trees on each side of the driveway, there are to be shrubbery plantations on two long triangles lying between Riverview Avenue and the Parkway, and also on a planting strip fifteen feet wide between the outer promenade and the gravel beach which supports this portion of the Parkway. The former shrubbery will extend along the Parkway for over six hundred feet, thus forming an important decorative feature. The latter shrubbery will be interrupted by long and short gaps to afford access to the beach. Mostly low-growing species of shrubs will be used, so this planting will not interrupt the views from carriages. It will agreeably soften the somewhat bald appearance of the beach and promenade. The shrubs to be used will endure occasional doses of salt water, which they are liable to get by capillary attraction from the gravel underneath during extraordinarily high tides, accompanied by easterly gales.

We made detailed plans for a little children's wading pool and sand courts, accompanied by walks and awning supports, which were to be constructed near the bath house at Captain's Island playground.

We advised as to the location of the Sumner statue.

We have had under consideration other projects which, if carried out, would add to the dignity and usefulness of the Charles River Parkway, but which are still too undecided to describe at this time.

Respectfully submitted,

OLMSTED BROTHERS.

REPORT OF THE CITY ENGINEER

OFFICE OF THE CITY ENGINEER, CITY HALL,
CAMBRIDGE, December 1, 1902.

Geo. H. Cox, Esq., President Cambridge Park Commission: —

DEAR SIR,—The new construction work of the year has largely been confined to Sections D and F of the Charles River Parkway.

The park road, in extension of Magazine Street from Granite Street to the Charles River Road and thence to Brookline Street, has been handsomely macadamized and finished with grass and tree plantings, making a fine driving connection with Brookline Street, Brookline Bridge and the territory beyond of Brookline and Boston.

The total length of this improvement is about 1,500 lineal feet. To provide for the surface drainage fourteen wooden outlets were put in. This construction emphasizes anew the desirability of a radical improvement in this avenue of approach to Cambridge, by making the widening and elevation of Brookline Street and the bridge, or their location, at some other point. Some studies have been made of this locality with that in view.

At Section F the work begun last year on the old wharves near the foot of Dunster and DeWolfe Streets has been practically completed; 3958.3 tons of stones from the old sea walls were removed and placed in the line of the beach east of Brookline Street. A large amount of piling was also removed, the earth of the wharves cut back and the beach, roadway and paths formed.

About 970 feet of roadway was built here with walks and tree planting.

Fifteen catch basins and the necessary drain pipe for outlets were put in.

The park roadway from Boylston Street easterly to DeWolf Street (about 1,500 feet in length), was surfaced with gravel.

The matter of a new bridge at the crossing of Boylston Street over Charles River has been the subject of some inquiry both by the Cambridge and the Metropolitan Park Commission, and interested citizens.

Preliminary studies for a bridge at this point were prepared and submitted as suggestions of what might be done at this point.

The concrete base for the Charles Sumner statue located in the small common at the corner of Massachusetts Avenue and Kirkland Street, was placed, and the requisite grading, etc., done.

The usual miscellaneous work required by the Park Department has been done.

Three assistants have been employed during a greater portion of the year on work connected with the Park Department.

Respectfully submitted,

L. M. HASTINGS,
City Engineer.

ACTS RELATIVE TO THE EXTINCTION OF THE BROWN-TAIL MOTH AND OTHER INSECT PESTS

[Acts of 1897, Chapter 516.]

An Act to Require Local Authorities to Suppress the Brown-Tail Moth.

Be it enacted, etc., as follows :—

Section 1. Whenever the pest known as the brown-tail moth shall be discovered in any city or town of the Commonwealth it shall be the duty of the city or town government to take immediate steps for its extinction and to prevent its spread. If they are in doubt what the pest is, they shall notify the board of agriculture, and whenever they are informed by said board that such pest exists within their respective municipalities they shall at once enter upon the work of its confinement to the infected area and its suppression.

Sect. 2. It shall be the duty of the board of agriculture to cause inspections to be made upon the receipt of notice from local authorities, and also whenever the board has reason to suspect the presence of this pest in any city or town, and to furnish the local authorities an ample supply of printed directions as to the best methods for its confinement and extinction.

Sect. 3. It shall be the duty of the owners and managers of premises infested by this moth to exert themselves persistently to confine and suppress it, under the direction of local and state authorities and to promptly report any spread of the pest which they may discover.

Sect. 4. Mayors and aldermen of cities and selectmen of towns who shall neglect or refuse to comply with the requirements of this act shall, on information or complaint of the district attorney or an indictment by the grand jury, and on conviction of such neglect or refusal, be fined ten dollars each for every day of such neglect or refusal after the receipt of due notice from the board of agriculture that their city or town is thus infested.

Sect. 5. The owner or manager of any infested premises who shall, after the receipt of a notice in writing from the mayor and aldermen of his city or from the selectmen of his town, or from the board of agricul-

ture, neglect or refuse to comply with this act, shall upon conviction of such neglect or refusal, before any court of competent jurisdiction, be fined one dollar for every day of such neglect, or confined in jail not more than five days nor less than one day, or suffer both penalties in the discretion of the court.

Sect. 6. This act shall take effect upon its passage. [*Approved, June* 11, 1897.

[Acts of 1902, Chapter 57.]

An Act to Authorize Certain City and Town Officers to Enter upon Private Lands for Exterminating the Brown-Tail Moth and Other Similar Pests.

Be it enacted, etc., as follows: —

Section 1. Whenever the brown-tail moth, the elm-leaf beetle, or any other tree or shrub destroying pest shall be discovered in any city or town of the Commonwealth, such city or town, by the municipal officer or officers to whom the care of the shade trees in the streets or roads of such city or town is or may be intrusted, may enter upon private land for the purpose of investigating said pest, and may adopt reasonable measures to prevent its spread and to secure its extermination.

Sect. 2. The owner of any land so entered upon, who shall suffer damage by such entry and acts done thereon under the authority herein given, may recover the same of the city or town in which the lands so asserted to have been damaged are situated, by action of contract; but any benefits received by such entry and the acts done on such lands in the execution of the purposes of this act shall be determined by the court or jury before whom such action is heard, and the amount thereof shall be applied in reduction of said damages.

Sect. 3. Whoever shall oppose the entry aforesaid, or obstruct the performance by the said local authorities of said work, shall be punished by a fine not exceeding twenty dollars for each offence. [*Approved, February* 5, 1902.

REPORT OF THE ELECTRICAL DEPARTMENT

OFFICE OF THE CITY ELECTRICIAN,
December 1, 1902.

To the Honorable, the City Council :—

In compliance with the City Ordinance, I respectfully submit the fourth annual report of the Electrical Department.

The scope of the duties of this department is seen by the following division of the work appertaining to it :—

1. Inspection of electric wires in buildings.
2. Supervision of electric wires and poles in the streets.
3. Electrical construction work.
4. Consulting electrical engineering for the municipal departments.
5. General electrical expert work for the City.
6. Maintenance and operation of the Fire Alarm System.
7. Maintenance and operation of the Police Signal System.
8. Supervision of the street lighting of this City.

INSPECTION OF WIRES IN BUILDINGS.

The ordinance requires that all buildings in this City that are wired for electric light, heat or power shall be inspected to see that the installation of the wires and apparatus has been done in a safe and proper manner.

The beneficial result of such inspection is shown by the lack of fire losses from this cause. In only three instances the past year have fires been caused by wires in any building in this City. In two of these cases it was due to an electric light wire getting crossed with a low potential telegraph or telephone wire and the failure of their protectors to properly operate, the protectors being of an old type.

On December 24, 1901, an electric light wire in Brighton became crossed with a Western Union wire and caused a fire to be started at the switchboard in the telegraph office on Boylston Street in this City. The failure of the cut-outs, which were of an old type, to operate was in part responsible for the loss which occurred, amounting to $400.

On January 1, 1902, an electric light wire became crossed with a telegraph wire, and set fire to the telephone fuse blocks in the basement of Felton Hall, in this City. These fuse blocks were the standard pattern

asbestos-lined wooden cut-out blocks used by the New England Telephone Company. The loss was trivial, but was the cause of a fire alarm being sounded. The failure of the cut-out to operate was also in this case in part responsible for this fire.

On February 17, 1902, a fire was caused by the short circuit of a supply cable feeding the power circuits in Appleton Chapel. The fire took place at rear of switchboard in basement. There was no fuses to protect this cable until switchboard was reached, as the service entrance was underground. The fire was noticed in time and the wires cut. This fire resulted only in a damage to a short section of cable and the charring of the switchboard frame.

This department has adopted and enforced the National Electrical Code of rules and requirements for the wiring of buildings. These rules are the standard rules for such work throughout the entire country. They are adopted by the engineering and architectural societies, the National Electric Light associations and the insurance companies. They are, moreover, annually revised, and any construction permitted that has been found defective in practice is prohibited, while new and improved methods are recommended, and in many cases insisted upon.

All new service connections must receive a certificate from this department before the Cambridge Electric Light Company will supply service to the subscriber. This insures that all new work will be inspected.

TABULATION OF THE INTERIOR WIRING INSPECTIONS MADE IN 1902.

Classification of Inspections.	For C. E. L. Co. Supply.	Isolated Plant.	Total.
Inspections	290	26	316
Visits	495	53	548
Capacity of 16 C. P. incandescent lamps wired	9,911	1,165	11,076
Number of low potential arc lamps installed	30	27	57
Number of motors installed (not including elevator motors)	41	22	63
Horse power of motors installed	284	171.5	455.5
Number of elevator motors installed	1	2	3
Horse power of elevator motors	15	22	37
Plant generators installed	4	5	9
K. W. capacity	2,535	174¼	2,709¼

It must be remembered, however, that the total current consumption at any one time is far less than that corresponding to the capacity installed. All inspections made are carefully recorded and indexed, by a card index system, in regard to the main details. These inspection records can be readily obtained at any future time, as they are indexed by street and number.

The following tabulation shows the increase of this branch of departmental work :—

Year.	No. of Inspections.	No. of Visits.	Capacity of 16 C. P. Lamps.	H. P. Capacity of Motors.
1896	133	206	....	...
1897	162	...	....	...
1898	112	...	5,578	79
1899	213	351	5,798	152
1900	252	481	7,936	164
1901	262	521	9,770	439
1902	316	548	11,076	455

SUPERVISION OF ELECTRIC WIRES AND POLES IN THE STREETS.

This year has seen only fifteen new poles set while six have been removed by the Telephone Company, and nine by the West End Street Railway Company so that the number of poles in the street remains the same as last year.

On Putnam Avenue twelve poles of the West End Street Railway Company could be removed without curtailing the facilities enjoyed by that company. On Oxford Street the telephone line and electric light line should be combined, as there is no necessity of two lines on that residential street.

There has been no general and complete examination of every pole by the City this year for lack of appropriation to hire sufficient help. I would recommend that such an examination be made next year and an appropriation be made therefore. Each company has, however, made an examination of their own poles.

I would again call to the attention of the City Council the desirability of reserving to the City the right to authorize the attachment of wires and cables, municipal or otherwise, to the elevated railway structures wherever the same shall be constructed. This right should be reserved in the order of grant. If this arrangement be made, then practically all poles can be removed from the streets upon which the elevated railway may erect these structures. If, however, a subway should be built instead of an elevated road, then proper conduit facilities for all companies should be furnished.

Sufficient conduit facilities should likewise be prepared for telephone and telegraph, electric light and street railway wires as well as municipal wires on the new Cambridge bridge.

Your City Electrician is glad to report this year that no fatal accidents or serious injuries have been received on any pole in this City due to electrical causes.

Pole Statistics.

Owner.	Number of poles Dec. 1, 1901.	Number of poles Dec. 1, 1902.	Changes in 1902.
Cambridge Electric Light Co.	3,119	3,126	7 Increase
New England Tel. & Tel. Co.	966	968	2 "
Boston Elevated Railway Co. (Iron)	838	834	4 Decrease
" " " " (Wooden)	25	20	5 "
City	1	1	
Total	4,949	4,949	

Joint ownership of poles is as follows:—

Cambridge Electric Light Co. and Boston Elevated Railway Co.	761
Cambridge Electric Light Co. and New England Tel. & Tel. Co.	17

Joint occupancy of poles is as follows:—

Cambridge Electric Light Co. on New England Tel. & Tel. Co.	185
New England Tel. & Tel. Co. on Cambridge Electric Light Co.	1,054
New England Tel. & Tel. Co. on Boston Elevated Railway Co.	37
Boston Elevated Railway Co. on New England Tel. & Tel. Co.	299
Western Union Telegraph Co. on New England Tel. & Tel. Co.	52
" " " " " Cambridge Electric Light Co.	24
Fitchburg Railroad Co. on New England Tel. & Tel. Co.	4
Postal Telegraph Co. on Cambridge Electric Light Co.	41
Number of wire attachments of Cambridge Electric Light Co. to New England Tel. & Tel. Co. poles	895
Number of wire attachments of New England Tel. & Tel. Co. to Cambridge Electric Light Co. poles	3,357
Number of permits issued to run telephone wires	508

Conduit Statistics.

The following table shows the ownership, length, and duct feet of conduit laid:—

Owner.	Date of Construction	Length.	Duct feet.
West End Street Railway Co.	1897	6,236.3	138,195.1
New England Telephone & Telegraph Co.	1888	11,616.1	75,343.7
" " " " " "	1898	55,196.	470,839.4
" " " " " "	1899	5,079.3	28,097.7
" " " " " "	1899 enlargement to 1888 conduit		19,266.9
" " " " " "	1901	907.1	2,721.3
" " " " " "	1902	12,072.6	39,170.6
Harvard College	1902	158.	740.
Total		91,265.4	774,374.7

The following table shows ownership, number, length and duct feet of outlet connections:—

Owner.	Number	Length in feet.	Duct feet.
New England Telephone & Telegraph Co.	179	16,067.2	18,821.8
Cambridge Electric Light Co.	16	221.	221.
West End Street Railway Co.	7	125.	549.
	202	16,413.2	19,591.8

The Telephone Company has furnished forty-one outlets for the use of the City in their conduit system. Six of these outlets are not laid together with their own telephone outlets.

This year the New England Telephone & Telegraph Company have installed the following conduit : —

Street.	From	To	Length.	Ducts.	Duct Ft.
Bay Street	Mass. Ave.	Green	249.5	3	748.5
Cambridge	Kirkland	Holmes Place	261.5	4	1,046.0
Church	Brattle	Palmer	344.4	2	688.8
Concord Ave.	Garden	Bond	1,291.8	3	3,875.4
Garden	Kirkland	Concord Ave.	1,497.8	4	5,919.2
Garden	Concord Ave.	Shepard	764.7	3	2,294.1
Harvard	Quincy	Prescott	238.0	3	714.0
Irving	Broadway	Scott	1,717.5	3	5,152.0
Kirkland	Garden	Cambridge	508.9	4	2,035.6
Mason	Garden	James	392.8	3	1,178.4
Plympton	Mt. Auburn	Mass. Ave.	352.6	3	1,057.8
Putnam Ave.	River	Western Ave.	800.8	3	2,402.4
Quincy	Mass. Ave.	Harvard	104.1	3	312.3
River	Putnam Ave.	Bridge	920.2	3	2,760.6
Western Ave.	Pleasant	Howard	1,047.5	4	4,190.0
Western Ave.	Howard	Bridge	1,598.5	3	4,795.5
			12,072.6		39,170.6

Harvard College has installed the following amount of conduit across the following streets : —

Across Kirkland Street, corner Cambridge	108	5	540
Across Oxford Street, at University Museum	50	4	200
	158		740

MUNICIPAL CONDUITS.

Municipal Conduits have received the endorsement of the City Council of Cambridge for six different years. Pursuant to this idea, Cambridge Representatives introduced into the Legislature of 1893–4–7, 1900, 1901, 1902, bills to allow the cities and towns of this State, excepting Boston, the right to construct and maintain a system of municipal conduits. Two favorable committee reports have been received, and in 1900 and 1901 such measures have been passed by the House of Representatives by overwhelming majorities, but have failed so far of concurrent action in the Senate.

This year your City Solicitor and Inspector of Wires attended six hearings upon this measure at the State House, but received co-operation from only two other cities, although all the cities of this State were communicated with. These two cities were obtained through personal solicitation rather than by letter. While still favoring Municipal Conduits

and believing that such would subserve the public interests the best, yet I would recommend that agitation for legislation be stopped until the City Council can extend to their own representatives the same co-operation, both financial and otherwise, as would be extended by the board of directors of any large corporation to their agents who seek or oppose legislation. This recommendation I feel obliged to make after a personal appearance at over eighteen legislative hearings in four different years upon this subject.

ELECTRICAL CONSTRUCTION WORK.

This year with the exception of the addition of a new tapper circuit to the fire alarm service there has been no new construction work undertaken, for lack of appropriation. This new circuit above referred to furnishes service to tappers in Wards 6 and 7. The condition of the service was such that it was imperative to divide the territory originally covered by circuit B. and consequently the new circuit was added. The length of wire run was approximately 3 1-2 miles.

The department has, as has been customary in the past years, looked after the electric bells, batteries, etc., in the public buildings. In many instances cases of repair work have been done on electric light wires for the Building Department. The revenue derived from this work the past year was $167.66.

CONSULTING ELECTRICAL ENGINEERING.

Very little electrical engineering work has been done the past year for the City departments. Wiring specifications were drawn for wiring the new stack room of the Cambridge Public Library and the work is now being supervised by this department.

Again this year would I call your attention to the consideration of installing an electric light plant at the Rindge Manual Training School to light this school, the two High schools and the Library.

GENERAL EXPERT WORK FOR THE CITY.

The subject of Municipal Conduits again this year absorbed a great deal of time in the early months of the year. Your City Electrician, together with the City Solicitor, attended over six hearings at the Legislature on this subject. While not relating particularly to the subject title I would call to your attention the desirability of encouraging the formation of municipal associations for the interchanging of ideas

relating to the different departments. All large semi-quasi public corporations have both state and national associations for the consideration of their interests, be it technical, commercial or legislative. The municipalities should likewise have a similar association to combat the powerful influence of such societies.

To make such an association a success requires both time and money and also the presence at the annual convention of a large number of delegates from the different cities. The city should not compel its servants to attend such conventions at their own expense, as no corporation would think of doing so. Such, however, has been the case in Cambridge, and your City Electrician has attended at his own expense conventions of the Municipal Electricians at Brooklyn, N. Y.; Wilmington, Del.; Pittsburg, Pa.; Richmond, Va., and also street lighting conventions at New Haven, Conn., and Columbus, O. At all of these conventions I have obtained ideas and valuable information which I should not have received had I not been present. I believe that a single competent representative of the city would obtain more information of value to a city than any committee not versed in the calling could expect to obtain.

FIRE ALARM SYSTEM.

Many important improvements contemplated for the past year had to be forgone for lack of appropriation. The condition of the system, therefore, remains as it was a year ago, except for some improvements in detail apparatus.

A statistical review of the system shows the following figures: —

Central station equipment	1
Fire alarm boxes on the street	101
Fire alarm boxes on private premises	27
Fire alarm boxes with keyless doors	28
Fire alarm boxes with glass keyless boxes	11
Length of circuit wires in system, in miles	93½
Tower bells connected with system	10
Steam whistles connected with system	3
Tappers connected in firemen's residences	53
Tappers in factories where firemen work	10
Tappers in permanent men's residences	23
Tappers in call men's residences	30
Tappers in electrical department men's residences	6
Telephones connected with the system	23
Number of bell alarms sounded the past year	203
Number of second alarms sounded the past year	3
Number of third or general alarms sounded the past year	None
Number of "no school" alarms sounded the past year	7
Number of still alarms reported the past year	28
Number of tappers other than in factories or firemen's houses and not in engine houses	3

This year again must I ask the consideration of the City Council to the recommendations of last year, and of preceding years. These recommendations I will quote: —

"In order to expedite the transmitting of an alarm of fire, I would recommend that sufficient appropriation be made the ensuing year to equip the seventy-two fire alarm boxes now unprovided with keyless doors with such device.

Your Inspector would again ask this year that a sufficient appropriation be made to allow the department to equip its fire alarm boxes, which are not yet provided with a non-interference pull with such a device. These pulls, if installed, would prevent the liability of a mixed up alarm from one of these boxes, due to the pulling of the box several times in rapid succession. He would also recommend the substituting of reverse current magnets in place of direct acting magnets in the tower strikers and whistles. This would obviate the present need of relays and local batteries, and would therefore render the service more reliable.

Again this year would your Inspector recommend that sufficient appropriation be made for the ensuing year to allow for a night operator at our Central Station. At the present time, the City is dependent upon the members of the day force who sleep in the Central Station for the transmitting of an alarm of fire at night. This, of course, requires that such members shall be suddenly awakened from sleep in order to transmit the alarm without loss of time. The strain thus thrust upon the operator has been such that it has resulted in the breaking down of the health of two members during the past five years, and who were, therefore, compelled to resign from the service. This position is a responsible one, and ought to have an operator continually on duty by night as well as by day.

This year must your Inspector call the attention of the City Council to the obvious need of a new Central Fire Alarm Station as well as providing for the burial of the wires of both the Fire Alarm and Police Signal Systems.

The necessity of a Central Fire Alarm Station is made prominent by two factors. First, the unsuitability of the present Central Station in its present arrangements and housing. Secondly, from the fact that the time has now come for the City to bury its wires. When this is done it should be arranged so that they may remain undisturbed for a period of years, and consequently the center of distribution of such a system should remain fixed. If such a provision be not made then much necessary expense will later fall upon the City if this center of distribution be changed. This necessitates, therefore, that the location of the Central Fire Alarm Station be now fixed for the future.

The present Fire Alarm Headquarters are located on the third floor of the Brattle Square Building. This building itself is far from being fireproof, and, moreover, is occupied for several different purposes. It should be borne in mind that even if the Fire Alarm System quarters did not take fire, but should be drenched with water in case of fire in another part of the building, that this would probably result in a paralyzing of the Fire Alarm System for a short period of time at least.

There are at the present time entering this station, independent of the Police Signal System, twenty-two metalic circuits, numbering forty-four wires. This comprises ten box circuits, four fast-time circuits, two local circuits, and six telephone circuits.

The present apparatus room is not conveniently situated in respect to the other rooms of the department. The individual pieces of apparatus and their wiring is not so mounted as to be readily accessible. The apparatus should all be mounted upon slate, and arranged as in all new model central stations in conformity with good engineering practice. While many improvements have been made towards this end, yet it will be impossible to remedy this without entirely renovating the present Central office.

In addition to these defects, there is not a properly equipped work shop or store room for the use of this department. The emergency wagon is kept in a basement totally unfit for such use, and the horse for the same is kept upstairs in Truck No. 1's house. The other two teams of the department are kept at private stables.

Your Inspector, therefore, urgently requests that steps be taken the beginning of the ensuing year to decide whether a new Fire Alarm Station shall be built, and where, in order that the fire alarm wires may be put underground next year. The City has at present 17 miles of duct ready to receive the wires.

A reliable automatic time stamp should also be installed in the Central office in order to automatically record the time an alarm of fire is received, for the present arrangement is not sufficiently accurate.

During the past year no additional fire alarm boxes have been added, for lack of funds, although they are urgently needed in many localities. There are at present eight petitions for fire alarm boxes on file in this office and the files of the Lamp and Wires Committee awaiting an appropriation for such purpose.

I would respectfully ask your consideration for the Fire Alarm Signal System, as the efficiency of the fire department is dependent to a great extent upon the efficiency of its Fire Alarm System.

POLICE SIGNAL SYSTEM.

In every annual report since 1893 your Inspector called your attention to the poor service of the Police Signal System in regard to its telephonic facilities. It must be conceded by all that one, if not the most essential, service to be performed by any Police Signal System is the providing proper telephonic communication between the street signal box and the police station. The importance of this service, moreover, is greater at night than during the day. I regret to say such service is not properly provided for by our signal system in a large number of cases. The signal system of Station No. 1 is practically useless at night on this account. The cause of this trouble is the induced currents set up in the police signal wires on account of their proximity to electric light wires. The remedy for such is to neutralize these induced currents by the use of twisted pair cables. The cables can be strung overhead or run under-

ground. The latter is far preferable, as such construction would be permanent. It would cost about $5,000 to equip District No. 1 with overhead cable. This money could far better be spent in permanent construction, for it is only a question of time when the overhead wires must all be buried.

The City could at the present time, if provided with cable, reach over 50 per cent. of its patrol boxes through ducts reserved for municipal wires. The remaining boxes could be reached by short sections of overhead cable. For the past four years your Inspector has sought to secure sufficient appropriation for such purpose but without avail."

Mayor Dickinson in a communication to the City Council recommended that some action be taken on this matter in 1901, but such recommendation has not been acted upon and his communication still remains upon the files of the Committee.

This year your Inspector bought and installed 102 Kellogg transmitters and Murdock receivers in the police boxes and private telephone lines for both Police and Fire Departments, at an expense of $260. The annual rental of the Bell instruments which they replaced was $310. This alone results in an annual saving of $310 to the department and without decreasing the efficiency of the service rendered.

The Police Signal equipment is as follows :—

Three complete station equipments.
Two patrol wagon house equipments.
Eighty street patrol boxes.
A five station private telephone system.
Forty-five miles of circuit wires.

A spare time stamp is urgently needed in order that the present time stamps can be overhauled and cleaned at regular intervals. This cannot be done at present without depriving the station table of its automatic time stamp.

The appropriation the ensuing year should provide for the installing of at least six new patrol boxes.

I would recommend that the entire Police Signal System be placed underground at one time and that the police box circuits be all brought to one central station instead of three stations as at present. Means should be provided by which each captain could talk with his men under him at any box in his district or the entire City. This could readily be accomplished by a system of switches on a central station table.

Under these conditions there would need be only three men each day on service at the central police table instead of three a day at each station table as is now required. Three permanent men familiar with

the operation of the electrical system should then be provided. These men while still members of the police force could be of great assistance to the Electrical Department in its maintenance of the Police Signal System.

STATISTICS RELATING TO THE WIRE DIVISION.

The following tabulation will show briefly the increase in department work in different branches since 1893:—

Increase in number of fire alarm boxes	26	or 28	per cent.
Increase in number of patrol boxes	35	or 77	" "
Increase in number of circuit wires in miles	28.5	or 25	" "
Increase in number of wire inspections since 1896	183	or 137	" "

All this requires additional labor and expenses, yet the working force today is the same in number as in 1894, while the appropriation the past year was the lowest since the organization of the Wire Department in 1893.

I would respectfully ask that, is it not self-evident from the above, that additional improvements and perfection of the Fire Alarm and Police Signal Systems have been prohibited to a large extent.

The following is an inventory of the Wire Division, which is taken at the same total figures as last year. The inventory is less than the cost of construction but exceeds a fair market value.

INVENTORY OF THE WIRE DIVISION.

Fire alarm apparatus and machinery	$13,320 00
Fire alarm supply and reserve apparatus	910 00
Fire alarm circuit wires and cross arms	2,050 00
Ninety-six fire alarm boxes	5,680 00
Police signal apparatus and machinery	3,100 00
Police signal supply and reserve apparatus	150 00
Police signal circuit wires and cross arms	2,320 00
Police signal, one-tenth mile of cable	165 00
Eighty police signal boxes	12,100 00
Testing instruments	465 00
Tools	550 00
Furnishings	450 00
Stock on hand	700 00
Old and unused apparatus (depreciated value)	300 00
Miscellaneous supplies	130 00
Horses and teams	260 00
Bell tower in Belmont school yard	400 00
	$43,050 00

ANALYZATION OF THE FINANCIAL ACCOUNTS OF THE CAMBRIDGE ELECTRIC LIGHT COMPANY AND THE CAMBRIDGE GAS LIGHT COMPANY FROM 1890 TO 1902, AS PER RETURNS GIVEN TO THE STATE BOARD OF GAS AND ELECTRIC LIGHT COMMISSIONERS.

Chart 1. This chart shows the number of each type of lamp maintained between 1890 and 1902. The oil and gas lamps were discontinued in 1897 and were replaced by Welsbach and incandescent lamps. The numerical increase is greatest for the incandescents and lowest for the Welsbach lamps.

Chart 2. This gives the cost per year for maintaining the different kinds of street lamps. Since 1897 there has been no reduction in price. It is noticable that the Welsbach cost less per year than the old style gas lamps, while its candle power is three times as great.

Chart 3. This chart gives the asset values of the Cambridge Electric Light Company. Between 1890 and 1892 and again in 1901 there is a sudden rise in asset values. In 1901 it increases to $710,551.89 which was due to the building of an entirely new station, first occupied in November of this year. This increase is noticeable in steam and electric plant, real estate but not in line equipment. This latter shows a gradual increase since 1895, amounting in all to $50,887.59. Notice the decrease valuation of the electric plant from 1894 to 1902 amounting to $79,574.38 in seven years. The old plant probably stands at a less valuation on the books of the Company at the present time. The charges for depreciation made since 1894 and shown on Chart 6 has taken care of this decrease valuation.

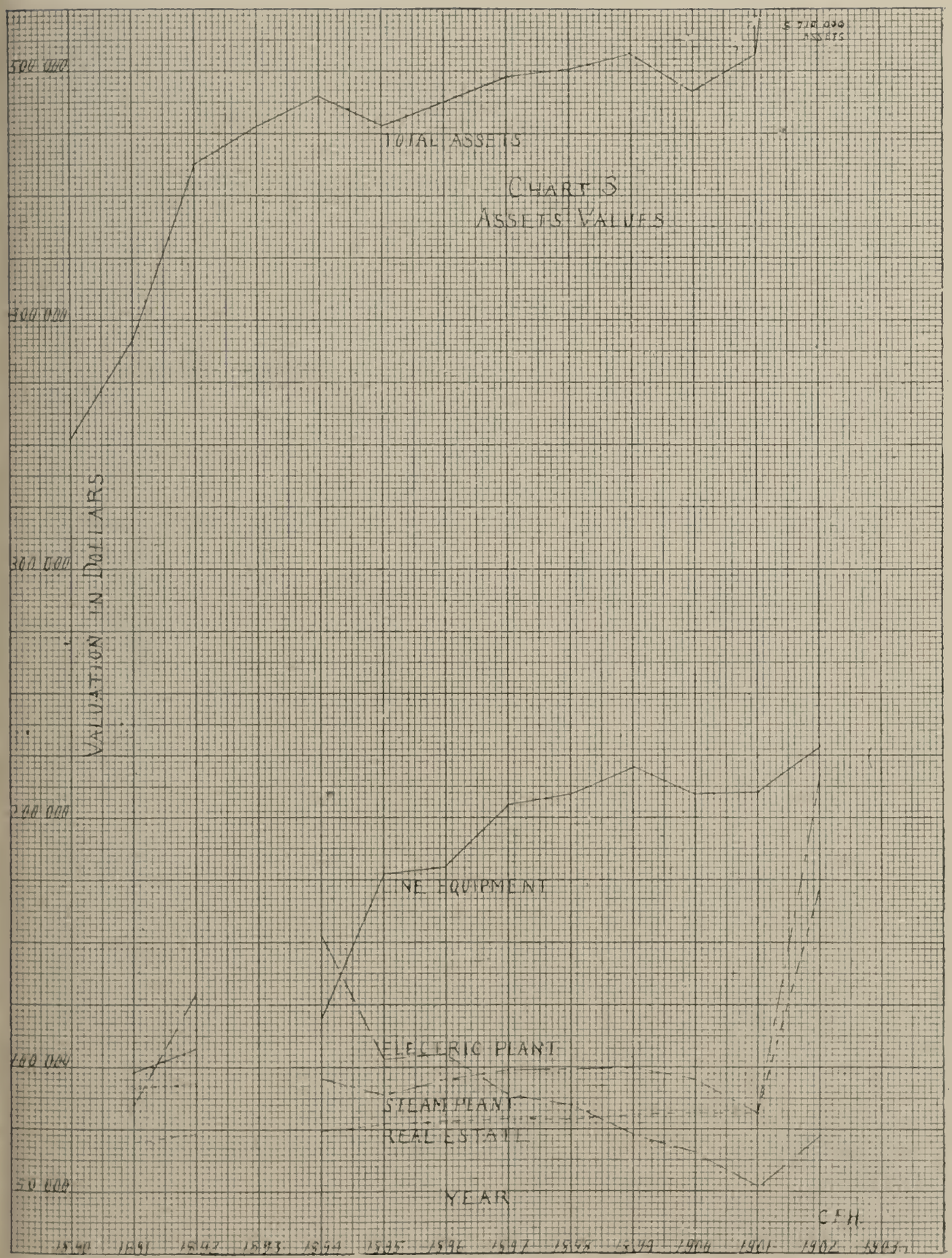
Chart 4. Here are plotted the liabilities. In 1902 they were $710,551.89 but are not shown as they exceed the capacity of the chart. There is a sudden rise between 1890 and 1892 and a gradual rise thereafter to 1901 when they suddenly increase again on account of the issue of new stock and notes. In 1900 the Company retired their $200,000 worth of bonds by issuing capital stock therefore. This stock was issued at 120 and therefore was equivalent to 5 per cent. in interest charges on bonds. In 1902 the Company issued $50,000 worth of additional stock for improvements. This stock was issued at $140 per share. In 1901 the notes payable rose from 0 to $163,000 while the unpaid bills also increased by $30,335.66. All of their recent additional liabilities are due to the building of their new power station. The past year the Company has issued $50,000 worth of par stock at $140 which will reduce these bills and notes payable.

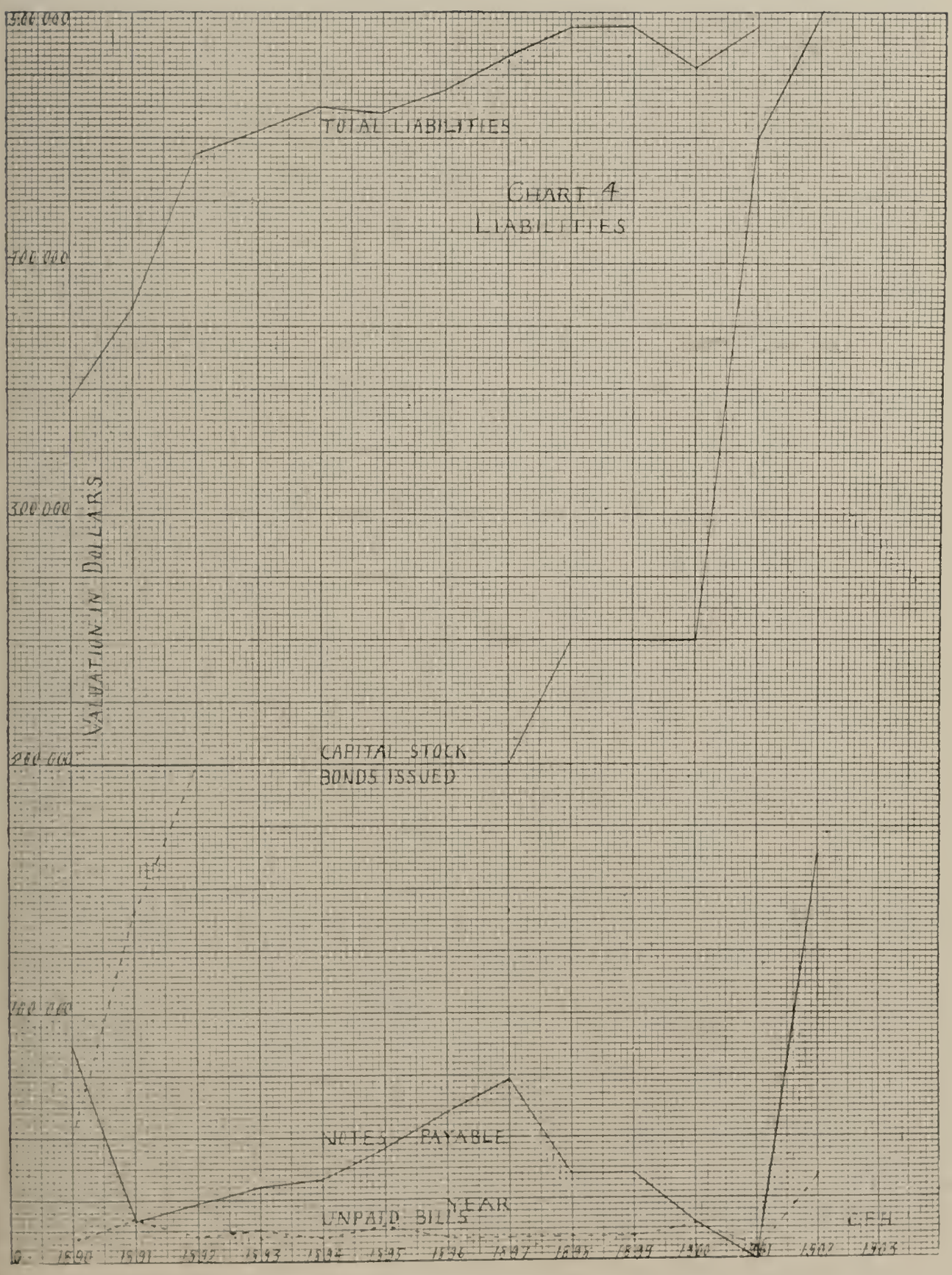
Chart 5. On this chart are plotted the income and operating values. From 1892 to 1902 we see that the operating expenses increase in the same ratio as the income which should not be the case. The yearly respective ratios of increase are 6.78 per cent. for income and 6.80 per cent. for operating. A still further analyzation since 1899 shows that this increase is due to station expenses more particularly, although there is an increase in distribution expenses, but this is less than the ratio of increase of income expenses. Such a result would either show faulty operation or perhaps some construction expenses are charged to operating expenses. Undoubtedly faulty operation is the cause of the greater if not the entire proportional increase of operating expenses over income. This could be caused by the overloaded condition of the old electric light station, or perhaps some of the additional machinery bought from time to time to carry the load until their new station was built has been charged to operating rather than to construction, as such expedient was looked upon as temporary. There is nothing in the annual returns to definitely show the cause of this increase ratio.

Chart 6. This chart shows the Profit and Loss Account. The Balance of Manufacturing Account increases rapidly between 1890 and 1891, and between 1897 and 1900. The balance to profit and loss was the greatest in 1894, and has shown a general tendency to decrease since then. This is due to the charges made for depreciation, which have averaged $21,666, since 1894. The interest charges drop off in 1898, and again in 1901, when capital stock is issued as shown on Chart 4. It will be noted that the dividends increase slightly in 1898, due to an increased dividend rate, while the other increases are due to the issuance of new stock.

Chart 7. On chart 7 is plotted the asset values of the Cambridge Gas Light Company. We note a general increase in asset values for machinery, street mains and real estate. In 1895 and 1898 there is a decreased valuation in street mains, while in 1900 and 1902 the machinery values decrease. In those years there is a charge made for depreciation, as shown on Chart 11. Since 1894 the real estate has increased in value, and meters have increased. If the book value of the stock in 1890 was $131.77, then it was worth $155.47 in 1900, after paying a ten per cent. dividend free from taxation for all the intervening years.

Chart 8. Since 1894 the liabilities have increased only slightly until 1900, but between then and 1902 they increased $97,139.99. This increase was due to the company installing a new water gas plant at their works. The notes payable account for $70,000, while the unpaid bills, deposits and notes payable increase $17,619.77 in 1901 over that in 1900. In 1902 the subscriptions for new stock liability is $47,250.


$ 7[illegible] 000
ASSETS
TOTAL ASSETS
CHART 5
ASSETS VALUES
500 000
300 000
200 000
100 000
50 000
VALUATION IN DOLLARS
NE EQUIPMENT
ELECTRIC PLANT
STEAM PLANT
REAL ESTATE
YEAR
C F H
1890
1891
1892
1893
1894
1895
1896
1897
1898
1899
1900
1901
1902
1903


TOTAL LIABILITIES
CHART 4
LIABILITIES
400 000
300 000
VALUATION IN DOLLARS
CAPITAL STOCK
BONDS ISSUED
NOTES PAYABLE
UNPAID BILLS
YEAR
C.F.H.
0
1890
1891
1892
1893
1894
1895
1896
1897
1898
1899
1900
1901
1902
1903

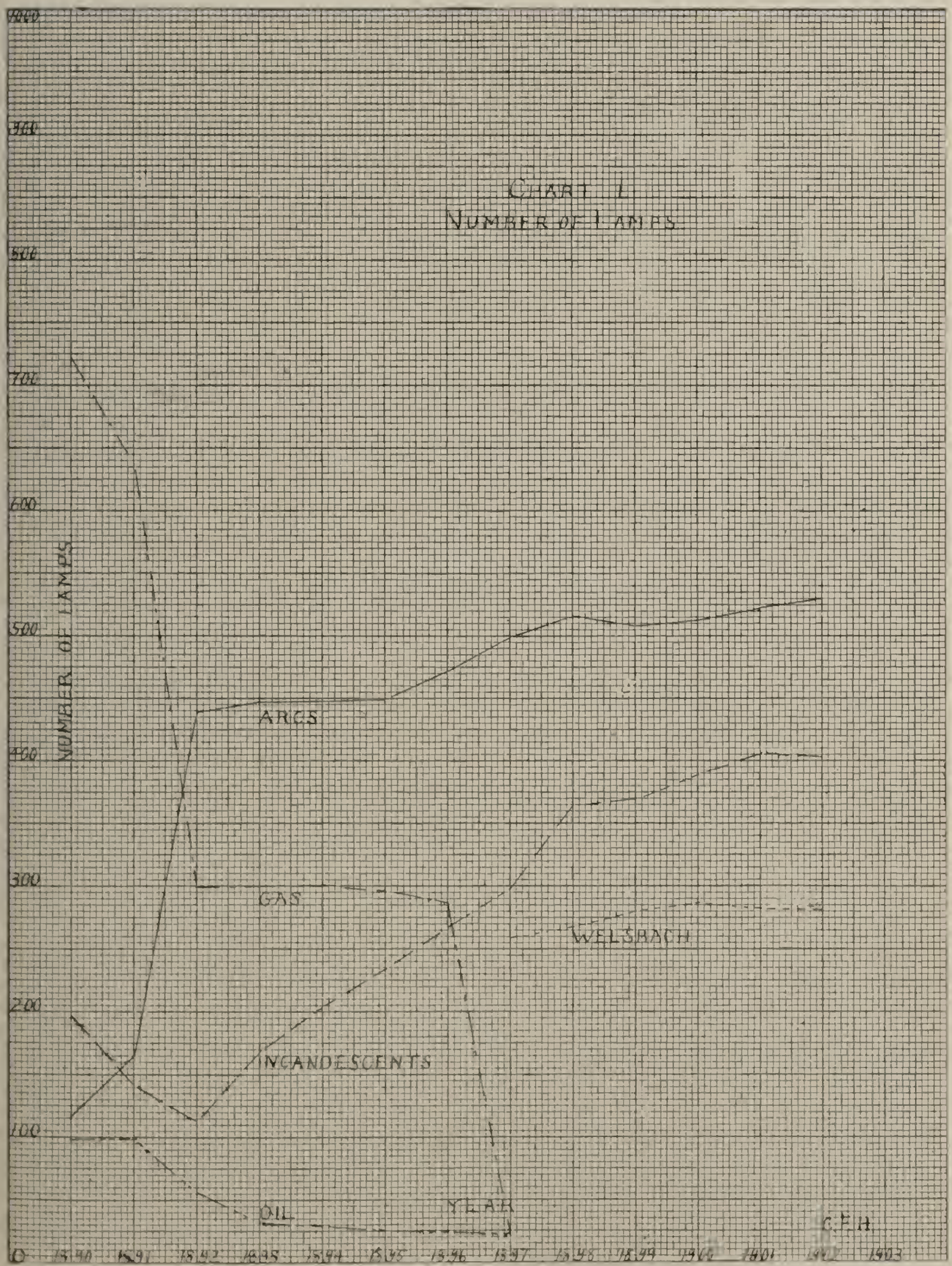


CHART I
NUMBER OF LAMPS
NUMBER OF LAMPS
800
700
600
500
400
300
200
100
0
ARCS
GAS
WELSBACH
INCANDESCENTS
OIL
NLAR
1890
1891
1892
1893
1894
1895
1896
1897
1898
1899
1900
1901
1902
1903

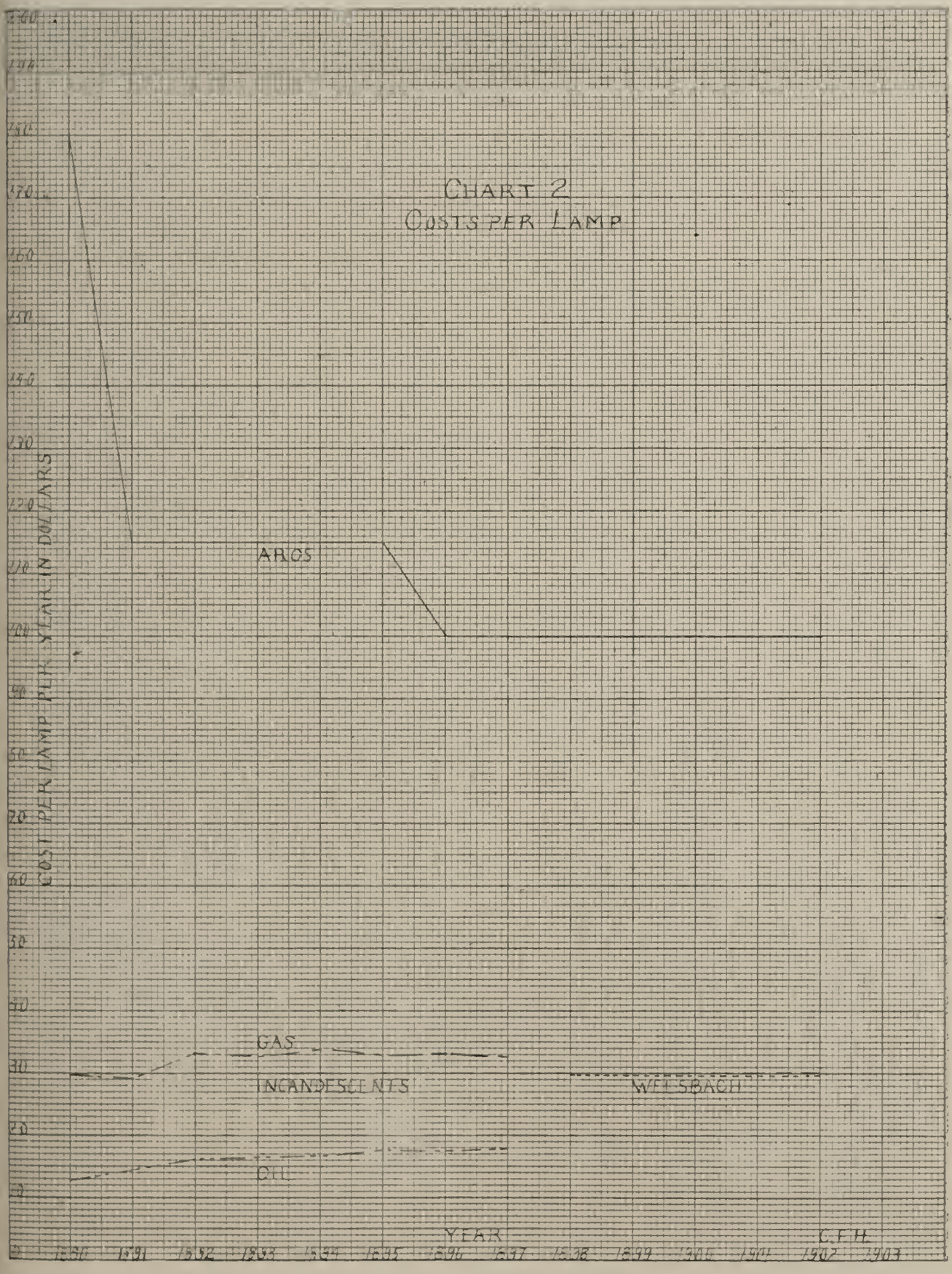


CHART 2
COSTS PER LAMP
COST PER LAMP PER YEAR IN DOLLARS
ARCS
GAS
INCANDESCENTS
WELSBACH
OIL
YEAR
C.F.H.

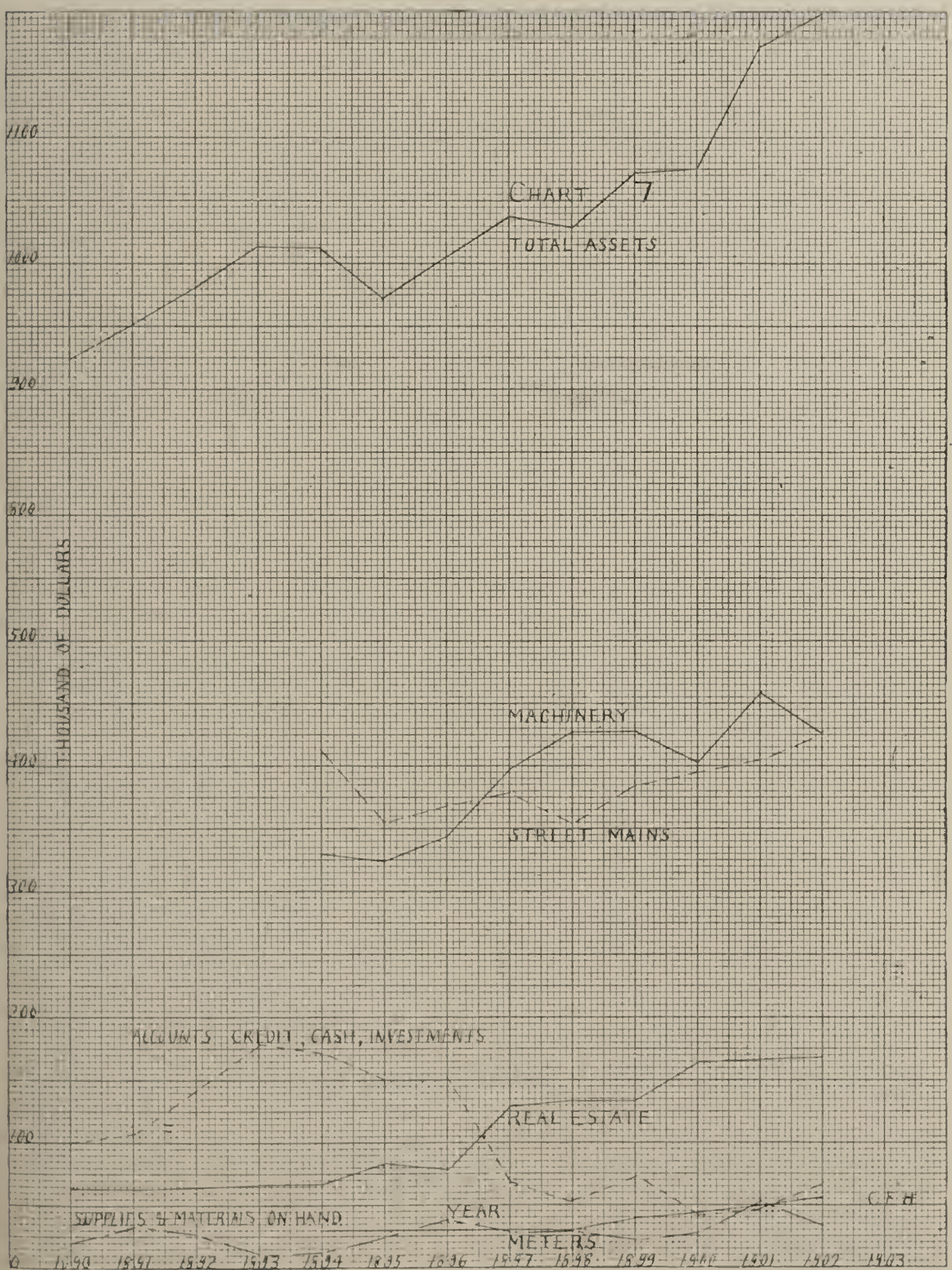


CHART 7
TOTAL ASSETS
MACHINERY
STREET MAINS
ACCOUNTS CREDIT, CASH, INVESTMENTS
REAL ESTATE
SUPPLIES & MATERIALS ON HAND
METERS
C.F.H.
THOUSAND OF DOLLARS
YEAR
1100
1000
900
800
700
600
500
400
300
200
100
0
1890
1891
1892
1893
1894
1895
1896
1897
1898
1899
1900
1901
1902
1903

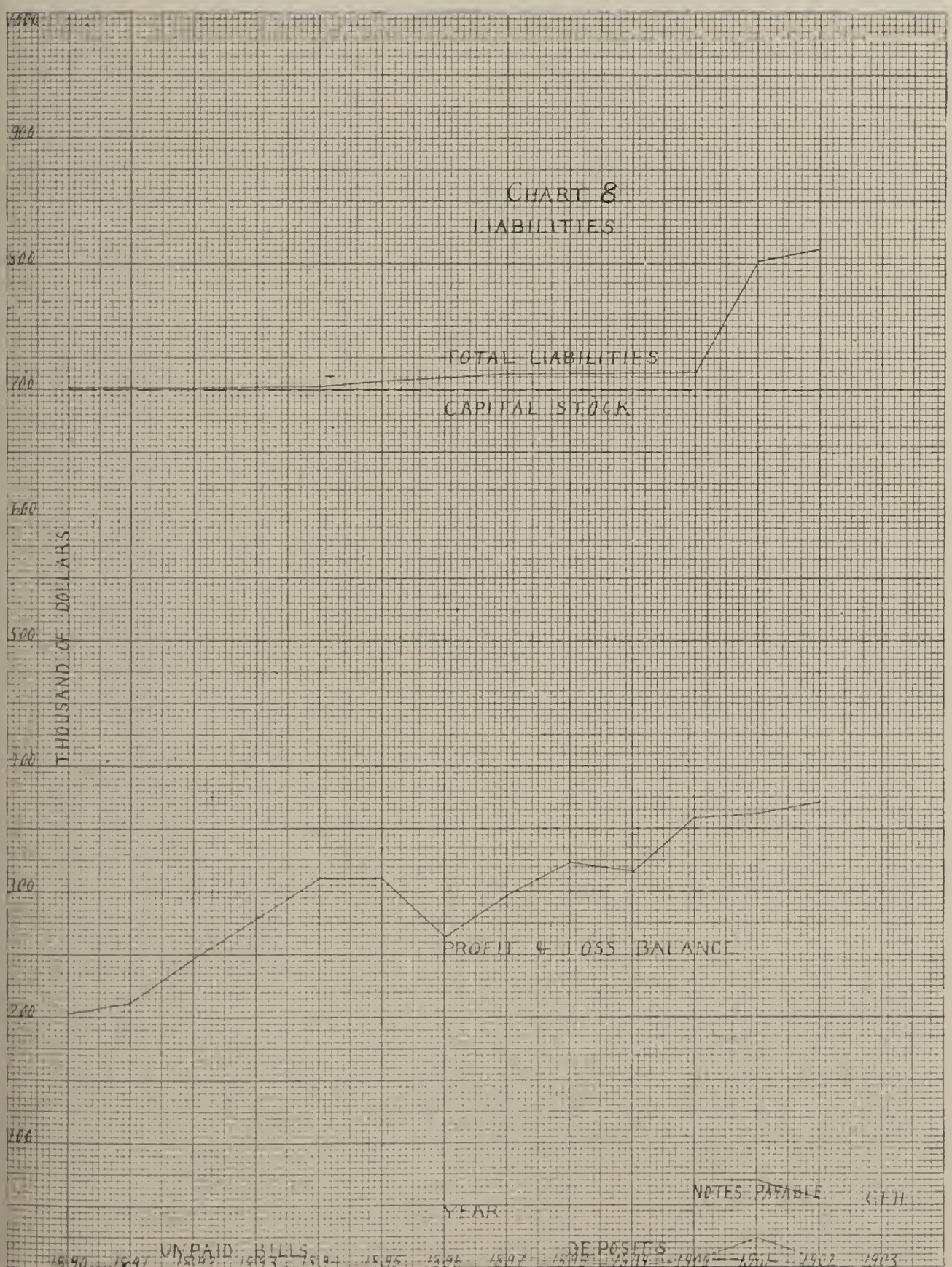


CHART 8
LIABILITIES
TOTAL LIABILITIES
CAPITAL STOCK
THOUSAND OF DOLLARS
PROFIT & LOSS BALANCE
NOTES PAYABLE
YEAR
UNPAID BILLS
DEPOSITS

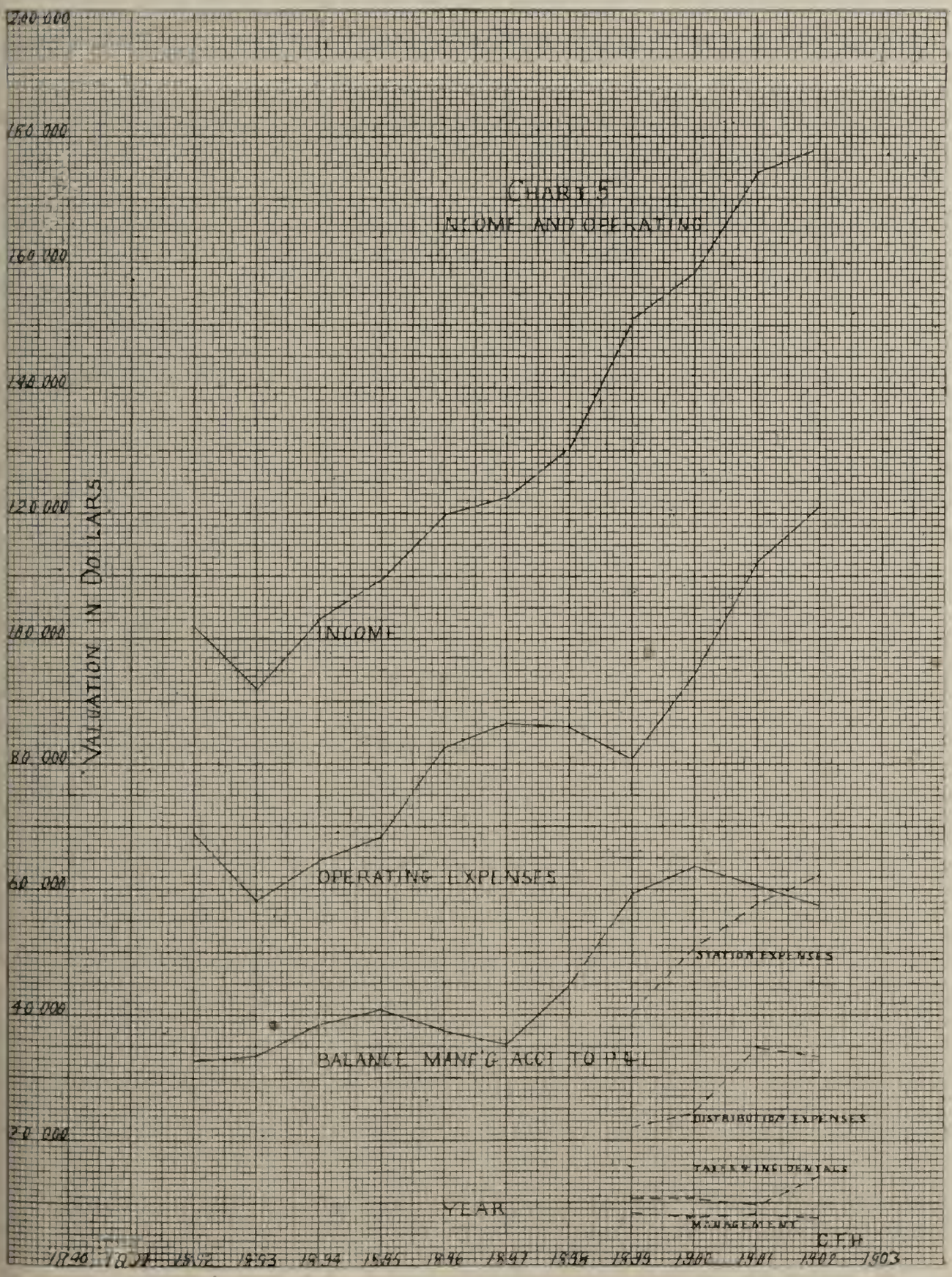


CHART 5
INCOME AND OPERATING
VALUATION IN DOLLARS
200 000
160 000
140 000
120 000
100 000
80 000
60 000
40 000
20 000
INCOME
OPERATING EXPENSES
STATION EXPENSES
BALANCE MANF'G ACCT TO P&L
DISTRIBUTION EXPENSES
TAXES & INSURANCE
MANAGEMENT
YEAR
1890
1892
1893
1894
1895
1896
1897
1898
1899
1900
1901
1902
1903
C.F.H

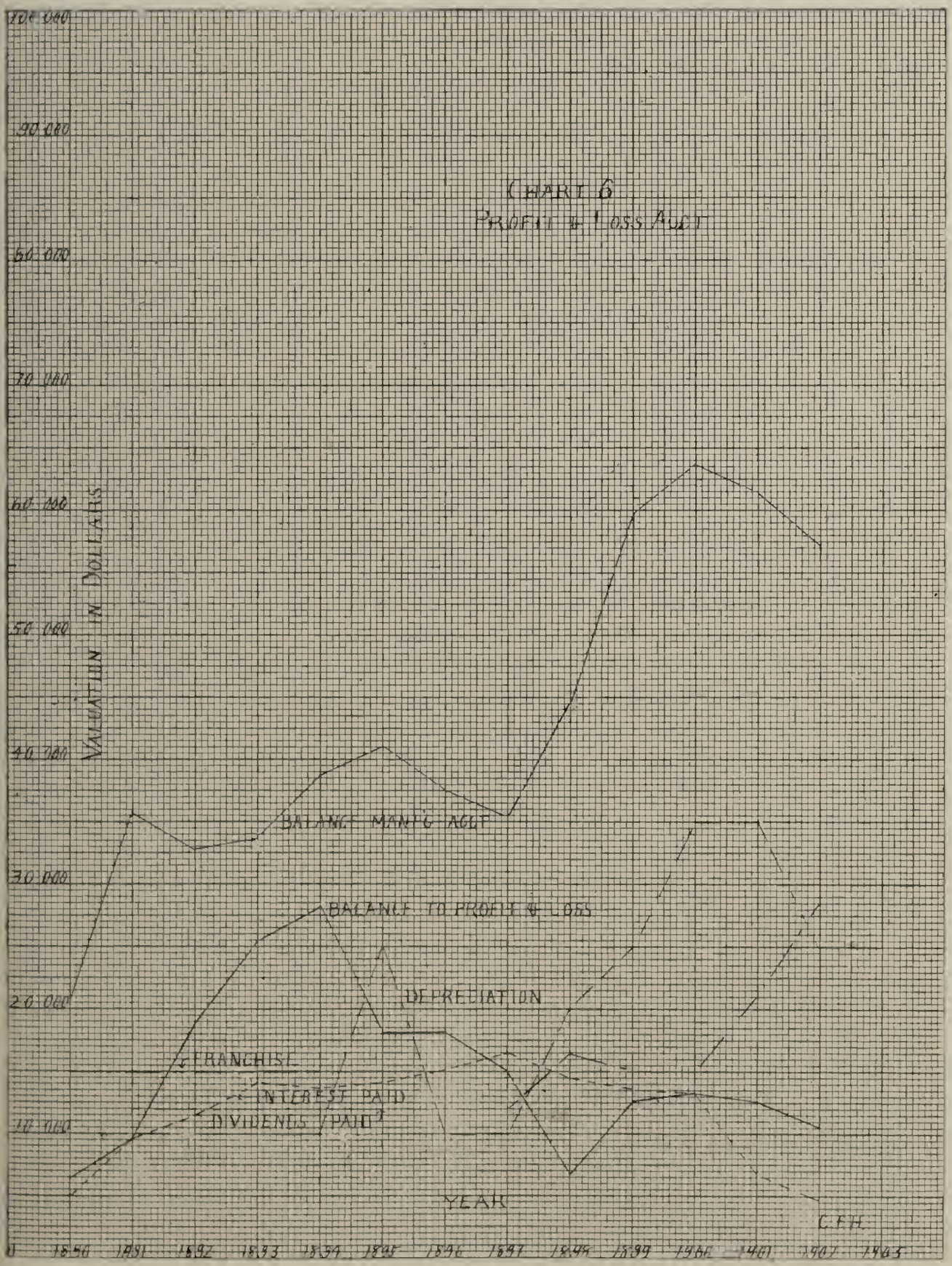


CHART 6
PROFIT & LOSS ACCT
VALUATION IN DOLLARS
90 000
60 000
70 000
50 000
40 000
30 000
20 000
10 000
0
BALANCE MANF'G ACCT
BALANCE TO PROFIT & LOSS
DEPRECIATION
FRANCHISE
INTEREST PAID
DIVIDENDS PAID
YEAR
C.F.H.
1856
1891
1892
1893
1894
1895
1896
1897
1898
1899
1900
1901
1902
1903

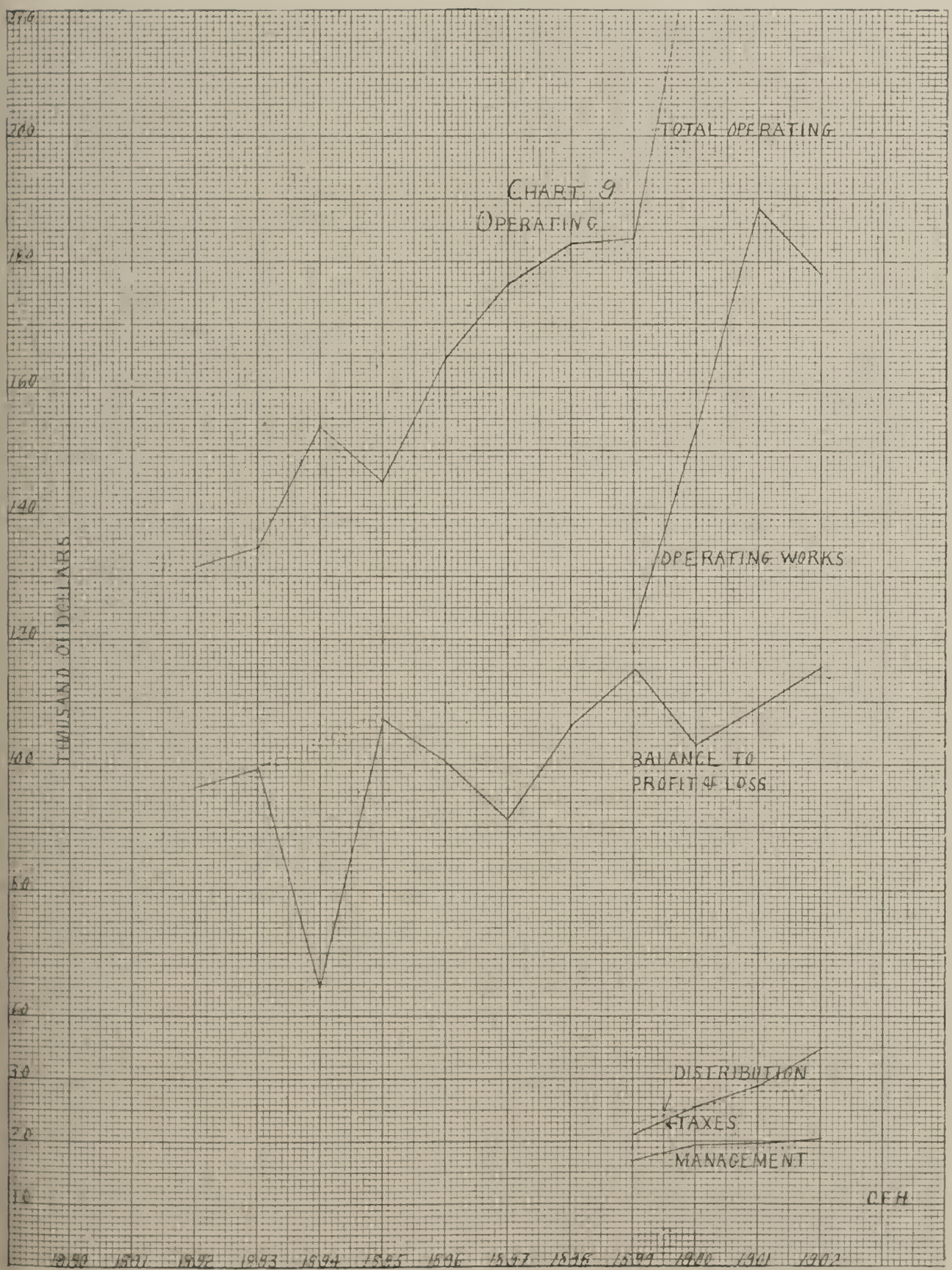


CHART 9
OPERATING
TOTAL OPERATING
OPERATING WORKS
BALANCE TO
PROFIT & LOSS
DISTRIBUTION
TAXES
MANAGEMENT
CEH
THOUSAND OF DOLLARS
200
160
140
120
40
60
30
20
10
1890
1891
1892
1893
1894
1895
1896
1897
1898
1899
1900
1901
1902

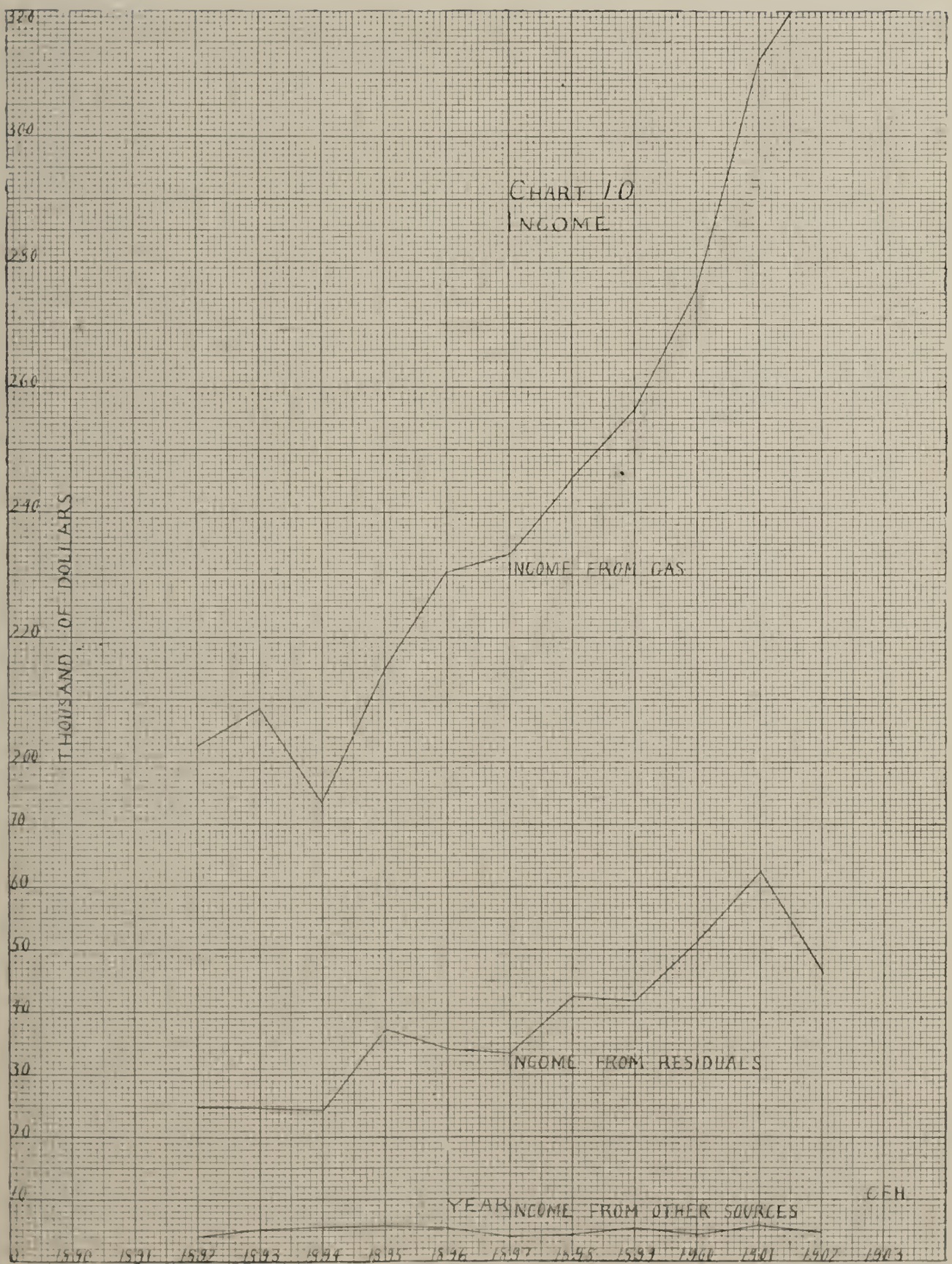


CHART 10
INCOME
INCOME FROM GAS
INCOME FROM RESIDUALS
INCOME FROM OTHER SOURCES
THOUSAND OF DOLLARS
YEAR
CFH
320
300
280
260
240
220
200
70
60
50
40
30
20
10
0
1890
1891
1892
1893
1894
1895
1896
1897
1898
1899
1900
1901
1902
1903

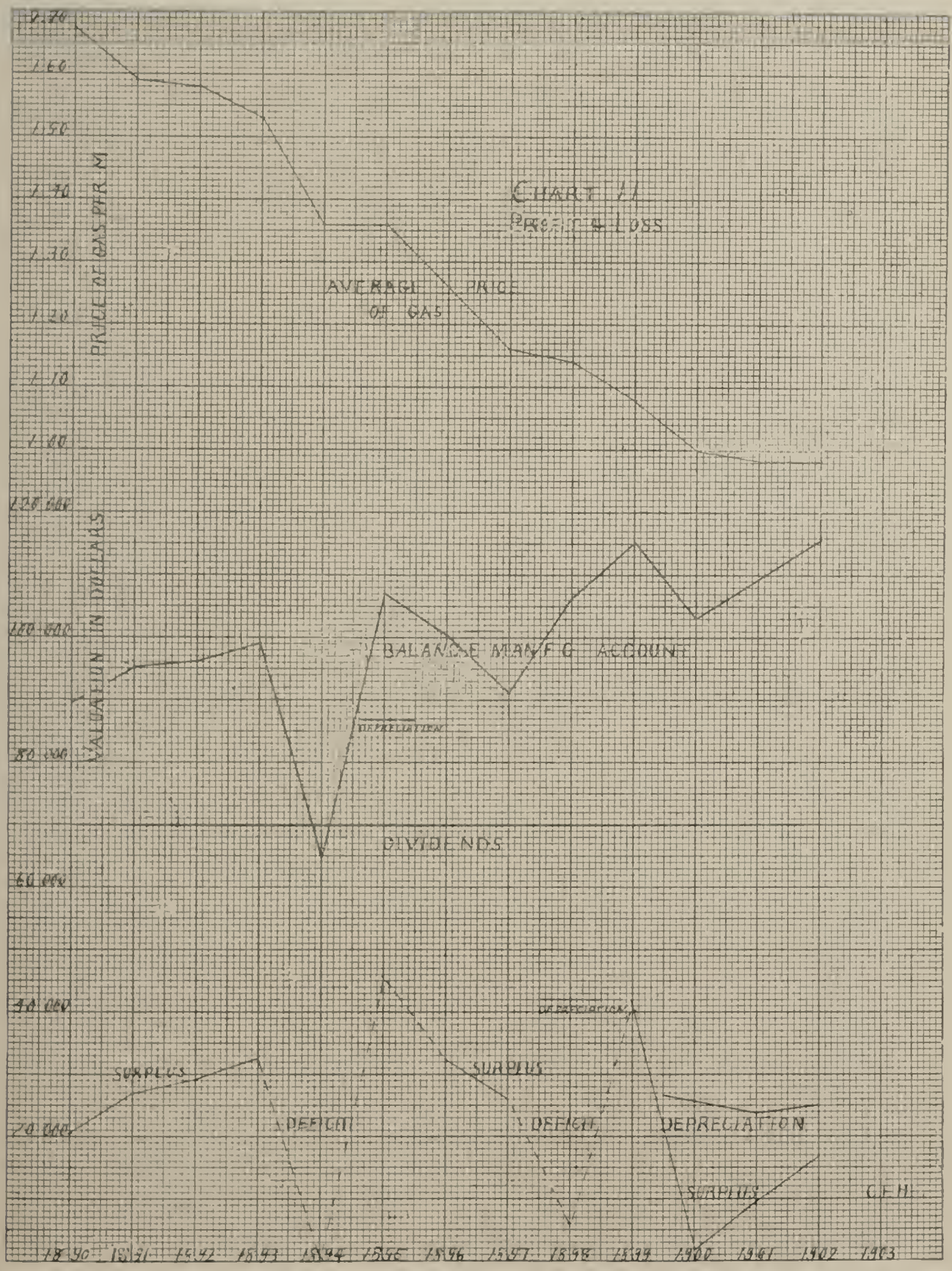


CHART II
PRICE & LOSS
AVERAGE PRICE OF GAS
PRICE OF GAS PER M
VALUATION IN DOLLARS
BALANCE MANF'G ACCOUNT
DEPRECIATION
DIVIDENDS
SURPLUS
DEFICIT
SURPLUS
DEFICIT
DEPRECIATION
SURPLUS
1890
1891
1892
1893
1894
1895
1896
1897
1898
1899
1900
1901
1902
1903

Chart 9. This chart gives the operating and balance to profit and loss account since 1892. The total operating expense for 1900 was $224,211.07; 1901 was $266,457.99, and 1902 it was $261,833.80. These figures were too great to plot on the chart with the scale given. The balance to profit and loss shows a tendency to increase except for the years 1894, 1896, 1897 and 1900. It is noticeable that the operating expenses at works decreases in 1902. The only explanation that I can see for that decrease is that the water gas plant installed has decreased the cost of manufacture, and to the fact that the coke, which was formerly a residual product and sold as such, is now used as one of the raw materials in producing gas in the water gas plant. Note that on Chart 10 the residual income decreases in 1902. The decrease of income for residuals in 1902 over 1901 is $15,660.57, while during the same period the decrease in operating expense was $10,706.73, but the amount of gas made increased 25,269,000 cubic feet.

Chart 10 gives the yearly income received from gas sales, residuals and a small income from other sources. It will be noted that the income from gas increases each year except in 1894, when it decreases, due to a reduction in price of gas from $1.53 in 1893 to $1.36 in 1894.

Chart 11. This chart shows the yearly balance of Manufacturing Account and dividends paid, depreciation, surplus and deficit, and also the average price of gas. In 1894 there was a deficit of $561.39, in 1895 a deficit of $45,601.54, and in 1898 a deficit of $6,314.02. In 1894 note that the balance of the Manufacturing Account is less than the dividends paid. This was due to the reduction in the price of gas from $1.53 to $1.36. This decrease in income for 1894 is noticeable on Chart 10. In 1895 a depreciation charge of $87,000 was charged off, which led to a deficit of $45,601.54 for that year. In 1898 a depreciation charge of $42,000 resulted in a deficit of $6,314.02. The other years have always shown a surplus.

Note the gradual tendency of the balance of Manufacturing Account to increase and which is the greatest in 1902. The surplus that year is $16,813.25 notwithstanding a depreciation charge of $25,299.89. Consider now the average price of gas. In 1890 it was $1.67 and in 1900 $1.00. The average yearly decrease being 6.7 cents for that period. Since 1900 it has remained practically constant, being 98 cents in 1902. The characteristic of this plot is a short horizontal line followed by a steep slant downward and at no time for more than two years has it remained horizontal except since 1900 and up to date. Furthermore, during the past year the balance of Manufacturing Account has been the greatest in the history of the company.

Taking into consideration the balance of Manufacturing Account and

the present price of gas which has remained without reduction for two years, I would recommend that a reduction in price of gas be sought through the proper channels next year. In this connection I would state that the dividend rate will be $80,000 next year instead of $70,000 because of the issue of $100,000 new stock last August. This stock was issued at $175. This issue of stock will, of course, cut down the interest charges which amounted to $4,537.20 in 1902. In seeking a reduction in the price of gas, the price of coal must be considered. Since the cost of coal is about 40 per cent. of the total expenses of the company, an increase in the cost of coal increases, therefore, the total expense on a 40 per cent. basis. Furthermore, any reduction in price taking place between now and July would affect the income only for the few months then remaining and its effect would only be a proportional reduction if the whole year be considered. The shortage of coal has led to an increase in the sale of gas which will go far towards increasing the balance of Manufacturing Account. Increase sale of gas affects the income on a 100 per cent. basis while the cost of coal affects the Expense Account upon a 40 per cent. basis.

In 1898 the percentage of carbonic oxide in the Cambridge gas was 5.15 per cent., in 1899 it was 6.93 per cent., while in 1901 it rose to 9.8 per cent., according to the returns of the State Inspector of Gas. In 1900 and 1902 there were no tests made by the State Gas Inspector. Formerly the State limited the amount of carbonic oxide in any gas to 10 per cent., but that limit was taken off when water gas plants were installed. Needless to say that carbonic oxide gas is a deadly poisonous gas, and the more that an illuminating gas contains of it the more poisonous such gas becomes.

Your Inspector sees no reason why such gas should exceed 10 per cent. as a constituent of any illuminating gas sold for domestic purposes. I would call to your attention to an article by Dr. Durgin, chairman of the Board of Health of Boston, which appeared in the *Boston Herald* on October 22, 1901, upon the subject of carbonic oxide in illuminating gas. I would recommend that apparatus for testing gas be bought, and such gas be tested once a month by some person to be appointed for that purpose, in order to see that the percentage of carbonic oxide be kept down.

I would commend the Board of Directors of the Cambridge Gas Light Company for their efforts the past year in preventing the control of stock passing into other hands, whose object could not be for the benefit of Cambridge citizens. The Cambridge Gas Light Company, possessing both a water and a coal gas plant, tide water dockage and large reservoir capacity, have at their command full facilities for the manufacture of gas at as low a price as could any consolidation afford to give it to them under

any known processes of the gas making art, considering the fact that it would require an interest charge upon over $500,000 worth of abandoned machinery now represented in the plant of the Cambridge Gas Light Company.

TELEPHONE CONDITIONS IN CAMBRIDGE.

I would call to the attention of the City Council the desirability of taking some action looking towards a reduction of telephone rates and classification of service. The operating company in this State is the New England Telephone and Telegraph Company of New York State. They are subject to no State supervision or control by a commission and, with the exception of only a few cities of this State, the rates are not limited by competition.

It has been the policy of this State to supervise and regulate by commissions the *semi-quasi* public utilities, such as railways, electric light and gas plants. I would therefore ask your consideration of the expediency of petitioning the present session of the Massachusetts Legislature for the appointment of a telephone commission. Such a commission, I believe, should be given ample authority to summon witnesses and books and they should be compelled to report in print to the Legislature of 1904 of their findings and recommendations. Should they favor a permanent telephone commission they should be instructed to draw up and submit in their report a draft of such legislation as they believe would best subserve the public and private interests involved. It would appear to me that the best results could be accomplished this way rather than to ask for a permanent commission at once. Any municipal draft for legislation that could probably be passed for the establishment of a commission would be very liable to have amendments unconsciously adopted by the Legislature which would seriously affect the operations of such a commission. If, however, a competent commission submitted a draft for such legislation it would be much less liable to curtailing amendments through the efforts of the corporations at the State Legislature.

I would submit the following list of references for information bearing upon the subject. Further additional references can be supplied by your City Electrician if desired.

For telephone rates both Bell and Independent Companies in twenty of the largest cities of this country see "Transactions of American Institute of Electrical Engineers" in April, 1902, and the discussions in June and July "Transactions," and also the February, 1903, "Transactions" for further telephone information.

For form of contract and royalties charged by the Parent Bell Company to the subsidiary companies see the Report No. 1659, 55 Congress, second session of the Committee appointed to investigate the Gas and Telephone Companies in the District of Columbia. This report also contains much other valuable information regarding the cost of service, etc.

For information relating to previous hearings upon this subject see the *Boston Post* for February 24, 25, 28, and April 14, 1899.

For copy of contract between American Bell Company and the Western Union Company to prevent the Western Union Company from entering the field as a competitor to the Bell Company see "Electrical Engineer," August 28, 1895.

For history of organization of the New England Telephone and Telegraph Company and its relation to the American Bell Company, royalties paid and amount of watered stock see the "Arguments and testimony for the remonstrants at hearing as to telephone rates and tolls and other questions affecting telephone companies before the Committee on Mercantile Affairs of Massachusetts Legislature of 1886."

For supervision over telephone companies by the State see "Sixth Annual Report Board of Railroad Commissioners of South Carolina," 1896.

REPORT OF STREET LIGHTING DIVISION.

In compliance with the ordinances the financial and statistical statement relating to street lighting is herewith submitted :—

FINANCIAL STATEMENT.

A more detailed account can be found in the Auditor's report.

The amount appropriated	$74,000 00
Transferred from Contingent Fund	310 00
Balance unexpended	60 36

The principal items of expense are as follows :—

For arc lighting	$52,442 93
For incandescent lighting	11,959 55
For Welsbach gas lighting	8,419 37
Salary of Superintendent	1,000 00

The expense for electric lighting has been as follows :—

ARC LAMPS.

Amount of bills rendered	$52,807 50
Amount of deduction for outage	282 93
Amount of deduction for deficit in current	81 64
Amount expended for arc lighting	$52,442 93

INCANDESCENT LAMPS.

Amount of bills rendered	$12,012 14
Amount of deduction for outage	39 25
Amount of deduction for deficit in current	13 34
Amount expended for incandescent lighting	$11,959 55

The expense for gas lighting has been as follows :—

WELSBACH GAS LAMPS.

Amount of bills rendered	$8,443 59
Amount of deduction for outage	24 22
Amount expended for Welsbach gas lighting	$8,419 37

STATISTICAL STATEMENT.

The number of hours in which one or more lamps failed to burn is:—

For arc lamps	7,073
For incandescent lamps	3,925
For Welsbach gas lamps	2,422
Total outage hours for all lamps for year 1902	13,420

The total numbers of different types of lamps on thoroughfares, parks and bridges maintained by the different City departments on November 30, 1902, is as follows :—

	Maintained by Lamp Department.	Park Department.	Bridge Department.	Totals.
Arc lamps	529½*	14	10	553½*
Incandescent lamps	401	2	38	441
Welsbach gas lamps	282	2		284
Welsbach naptha lamps		118		118
Total lamps	1,212½*	136	48	1,396½*

Grand total number of street, park and bridge lamps maintained in the City of Cambridge on November 30, 1902, 1,396½*.

* Half of the expense of one arc lamp borne by private parties.

INVENTORY OF LAMP DIVISION.

282 lamp posts set in streets, at $10.00	$2,820 00
Office furniture	250 00
Stock on hand in Central Square Building	300 00
Horse and team	340 00
	$3,710 00

This inventory does not take account of any unused lamp posts which remain upon the public streets, in as much as the number is not known and in many cases the ownership, whether municipal or private, is doubtful.

TABULATION SHOWING APPROPRIATION EXPENDED AND NUMBER OF LAMPS MAINTAINED EACH YEAR FROM 1890 TO 1902, INCLUSIVE, WITH OUTAGE HOURS FOR ELECTRIC LIGHTS.

Year.	Appropriation Expended.	Number of Oil Lamps.	Number of Gas Lamps.	Number of Welsbach Gas Lamps.	Number of Incandescents.	Number of Arc Lamps.	Total Number of Lamps.	Outage hours for Electric Lamps.
1890	$49,269 02	98	722 4 feet		197 32 c. p.	116 2000 c. p.	1,133	17,457
1891	47,989 92	98 7 naptha	637		143	164	1,049	36,805
1892	63,862 68	56	299 5 feet		114	437 1200 c. p.	906	10,254
1893	66,615 93	32	300		168	447	947	7,166
1894	68,988 81	29	302		204	447	982	8,502
1895	69,926 61	25	296		233	448	1,002	6,776
1896	67,325 31	24	287		266 40 c.p.	471	1,048	7,027
1897	69,264 96	23	21	259	297	498	1,098	9,616
1898	69,182 20			266	363	515	1,144	56,194
1899	71,980 42			280	369†	507†	1,156†	8,479
1900	71,998 78			286	387	512½*	1,185½*	7,122
1901	72,775 75			283	405	522½*	1,210½*	10,012
1902	74,310 00			282	401	529½*	1,212½*	10,998

* Half the expense of one arc lamp maintained by private party.

† Park Department maintains 14 arcs and 2 incandescents formerly maintained by this department.

TABULATION SHOWING COST PER LAMP PER YEAR FROM 1890 TO 1902, INCLUSIVE, WITH NUMBER OF HOURS EACH LAMP BURNED.

Year.	Oil Lamps.		Gas Lamps.			Welsbach Gas Lamps.		Incandescent Lamps.			Arc Lamps.		
	Annual Cost per Lamp.	Hours of Lighting.	Annual Cost per Lamp.	Hours of Lighting.	Size of Burner.	Annual Cost per Lamp.	Hours of Lighting.	Annual Cost per Lamp.	Hours of Lighting.	Candle Power.	Annual Cost per Lamp.	Hours of Lighting.	Candle Power.
1890	$12 74	3,694	$29 71	3,694	4-foot burner			$30 00		32 c. p.	$180 00		2,000 c. p.
1891	14 43	3,833	29 14	3,833	4-foot burner			30 00	3,953	32 c. p.	180 00 115 00	3,953 4,000	2,000 c. p. 1,200 c. p.
1892	16 10	3,676	33 13	3,676	5-foot burner			30 00	4,000	32 c. p.	115 00	4,000	1,200 c. p.
1893	16 22		32 77		5-foot burner			30 00	4,000	32 c. p.	115 00	4,000	1,200 c. p.
1894	16 39	3,270	33 47	3,270	5-foot burner			30 00	4,000	32 c p.	115 00	4,000	1,200 c. p.
1895	17 79	3,566	32 90	3,566	5-foot burner			30 00	4,000	32 c. p.	115 00	4,000	1,200 c. p.
1896	17 40	3,628	33 15	3,628	5-foot burner			30 00	3,900	32 c. p. 40 c. p.	115 00 100 00	3,900	1,200 c. p.
1897	17 78	3,628	32 41	3,628	5-foot burner			30 00	3,900	40 c. p.	100 00	3,900	1,200 c. p.
1898						$29 88	3,700	30 00	3,900	40 c. p.	100 00	3,900	1,200 c. p.
1899						29 88	3,900	30 00	3,900	40 c. p.	100 00	3,900	1,200 c. p.
1900						29 88	3,900	30 00	3,900	40 c. p.	100 00	3,900	1,200 c. p.
1901						29 88	3,900	30 00	3,900	40 c. p.	100 00	3,900	1,200 c. p.
1902						29 88	3,900	30 00	3,900	40 c. p.	100 00	3,900	1,200 c. p.

The appropriation made at the beginning of the year was insufficient to maintain all the lamps installed or ordered in, consequently there has been no increase or improvement in the street lighting of this City.

In July your City Electrician reported to the Park Department seventy-one instances where the trees shaded the street lamps and repeatedly requested that they be trimmed. I regret to say that I failed to receive the co-operation from that department which I believe the best interest of the City requires and in only a few instances in the list furnished were the trees trimmed. These cases were only where a general trimming of the trees on certain streets of the City happened to coincide with some of the locations where trimming was requested. The total expense of all the trimming asked for would not have exceeded fifty dollars, while the value of illumination lost many times exceeded that sum.

The contract for street lighting this year was renewed with the Welsbach Street Lighting Company under the same terms and conditions as last year.

The contract for the electric lighting was not renewed as your Superintendent has not yet decided what type of lamp should be installed in the City. In connection with the determination of the type of lamp best suited for lighting this City, the Mayor and your City Electrician visited Hartford and Unionville, Conn., last October for information. Your City Electrician has also been gathering many statistics and much information the past year upon this subject which will require immediate attention next year.

The Cambridge Electric Light Company are already occupying their new station and furnish the commercial lighting therefrom, but they still maintain their old station with belt driven arc machines for the City lighting.

It is therefore necessary that the City determine what is the best type of lamp for street lighting, considering quality of light, cost of installation and maintenance. It is upon these two last named considerations that the price paid must be based.

This determination should be made as soon as possible in order that the proper machinery may be installed in the new station. The decision now made must be for a future decade and should therefore receive thorough and careful investigation in this and neighboring cities.

To the Chairman and members of the Lamp and Wire Committee I desire to extend my thanks for the courtesy shown me the past year.

CHARLES F. HOPEWELL,

Inspector of Wires,
Superintendent of Lamps,
Acting City Electrician.

REPORT OF THE SUPERINTENDENT OF PUBLIC BUILDINGS

Office of the Superintendent of Public Buildings,
City Hall, Cambridge, December 1, 1902.

To the Honorable, the City Council of the City of Cambridge: —

Gentlemen: — I have the honor, as Superintendent of Public Buildings of the City of Cambridge, to submit the seventeenth annual report of this department, comprising a detailed account of the building operations in this City, together with the amount expended on City property, in accordance with Section 2, Chapter 13, of the City Ordinances.

The past year has been no exception to those that have preceded in reference to the attention and care given to the City buildings. It is to be deeply deplored that so small an amount of money is annually appropriated for the care and repair of the public buildings, because it is impossible to maintain them in the condition in which they should be kept with the amount allowed for this purpose. There was appropriated the past year $7,500 for the care and repair, exclusive of salaries, of our City Hall, Brattle and Central Square buildings, City building, Fourth Street, City building, Massachusetts avenue, and the maintenance of the two armories for the militia companies. Deducting the cost of lighting and fuel, amounting to nearly $5,000, only $2,500 remained to be expended on these buildings. Out of that balance came the cost of supplies of about $600, leaving only $1,900 for repairs. Every building requires some repairs annually.

The City Hall, to which all citizens point with pride, and which creates such a favorable impression upon visitors, will from careful inspection demonstrate the necessity of immediate attention. This building alone should have at least $2,000 expended upon it in the way of repairs and painting the coming year. A delay in this work will result in a great increase in the cost of doing it later on. When we inspect our City buildings, admire their architectural beauty and are impressed with their general arrangements and conveniences, we are apt to forget the importance of a liberal appropriation for their maintenance. A nominal expenditure at the proper time results later on in the saving of a considerable larger amount. I do not wish to be understood in advocating a

liberal appropriation to mean that money should be expended extravagently, but that after a careful examination in all cases proper repairs be made and the best results be obtained from the money expended. I realize that the condition of our buildings is not up to the customary standard. This is not due to any neglect on the part of this department, but owing to the lack of sufficient appropriation to make the needed yearly repairs.

This department has expended upon City buildings during the past eight years, including 1902, the sum of $1,637,265.39 and for election expenses $13,441.25, making a total of $1,650,706.64, of which amount $739,872.10 was for new buildings. The amount expended the past year was about $126,800, a material decrease from that of former years. This may be accounted for in a measure from the fact that no appropriation was made for sanitary improvements in our school buildings. This has been the custom in former years. We have several school buildings needing sanitary improvements in order to make them habitable, and I recommend that a special appropriation be made for this purpose the coming year, and that it be included in the yearly estimates, in order to give the department proper time to prepare plans and specifications, so that the work may be commenced as soon as the summer vacation begins. In former years the appropriation has been made so late in the season that the department has been very much handicapped in getting the schools ready for the fall opening; and in some cases it was necessary to postpone the opening of the schools in order to complete the work which was begun late in the season

The various City buildings have had the same care bestowed upon them as in former years although very limited repairs have been made for want of a sufficient appropriation. With the small amount appropriated the results have been satisfactory. During the late fall I received from Judge Almy of the Second District Court of Eastern Middlesex, sitting in Brattle Square building, a request for additional room for the court, the present quarters being overcrowded. I have carefully considered his request and have made an inspection of the building and can see no reason why additional room should not be granted. As soon as the new State armory is completed and Company B vacates its present quarters, the City will have the entire upper floor at the Brattle Square building at its disposal. The hall can be used as a Ward room and the present Ward room can be utilized by the court. The business of the court has increased to such an extent that additional room is imperative and I recommend that an appropriation be made the coming year and authority given the Superintendent of Public Buildings to make such changes and alterations as will relieve the present crowded condition of the court rooms.

If these changes are made and additional room given, the County should be called upon to pay the City at least $1,000 yearly rent for its accommodations as I consider the present rental of $450 per year entirely insufficient. There is no City in the County that receives so small a rental for the accommodations afforded as the City of Cambridge and if additional room is not furnished I recommend that the yearly rental for the present quarters be increased to $800.

ARMORIES.

The expectation at this time is that the new State armory will be completed early next fall and then the three local militia companies will be transferred to the new building. The expense of maintenance will then fall on the State and the City will be called upon to pay only the amount due for interest and sinking fund on the bonded debt of $150,000, the cost of land and building.

Some adverse criticism has been made in reference to the wisdom of the erection of so expensive an armory, but a careful study of the State law governing the State militia and the obligation of cities to maintain its companies will be convincing proof that the investment of the City in an armory has been wise and from a financial standpoint judicious. The erection of an armory is not experimental for almost every large city in our State has built or is building an armory similar to that in process of construction in this City. The State obliges all cities having militia companies to provide suitable quarters for them and these quarters must be acceptable to the Adjutant General who fixes the allowance for rent based upon the accommodations provided. When this building is completed the City can point with pride to it, not only from the view points of architecture, but also from those of liberal proportions and general arrangements and accommodations. I think the time is not far distant when all armories will be the property of the State or of the Government. When the Government takes exclusive control of them the City will be reimbursed for all money expended in the erection. When we consider that the militia is not alone for the protection of our own City, but may be called to other parts of the State by the Governor, it would seem that the cost should be borne by the State.

The present law compelling cities and towns having militia companies to maintain them without being reimbursed by the State is arbitrary and unjust. Cities and towns having no companies are assured of the same protection as those that are compelled to maintain them, although they contribute nothing directly for their support. Owing to the fact that the armories are soon to be vacated, the department has done but

very little in the way of repairs thereon. The armory in which Company C is located, on Beech Street, is owned by Samuel F. Woodbridge, Esq. The City took a four years' lease of the property, dating from July 1, 1900, paying the sum of $2,000 for the full term. The cost of maintenance of this building is for supplies, lights and fuel. The City owns the furniture in this building, including the gun racks and cases.

RIFLE RANGE, LEXINGTON.

In 1895 the City leased a piece of land from Mr. W. H. Homans, on Woburn Street, Lexington, for a rifle range for the use of our militia companies, taking a ten years' lease. The City paid $1,200 in advance for rental of the property in full. The range is built for two hundred, five hundred and six hundred yards' practice, and includes a shooting house 22 feet x 40 feet, and target houses having twenty-four targets, which are connected with the firing point by telephone and electric bells. Many complaints are made from adjoining property owners of the danger from stray bullets falling upon their land, and during the past year additional precautions have been taken to prevent as far as possible any danger from this cause in the future. I recommend that an appropriation of $250 be made the coming year for the purpose of engaging a competent person to take charge of the property and keep the buildings in proper condition for the use of the militia. Under the present conditions I am satisfied that at the expiration of the present lease the City will be obliged to select other quarters for a shooting range.

CARE AND REPAIR OF CITY BUILDINGS.

CITY HALL.

For fuel	$850 65
Electric lighting	1,013 55
Gas lighting	38 70
Repairs	819 27
Supplies	458 98
Janitor	1,200 00
Engineer	1,350 00
Fireman	728 00
Watchman	728 00
Sundry labor	2,514 78
Total	$9,701 93

BRATTLE SQUARE BUILDING.

Fuel	$549 58
Electric lighting	167 40
Gas lighting	539 90
Repairs	481 96
Supplies	81 33
Janitor	1,006 64
Extra labor	999 26
Total	$3,826 07

CENTRAL SQUARE BUILDING.

Fuel	$147 25
Electric lighting	344 00
Gas lighting	105 20
Repairs	134 41
Supplies	40 65
Janitor	1,400 00
Extra labor	119 00
Total	$2,290 51

Miscellaneous account	$1,498 18

ALLSTON SCHOOL.

On December 12, 1901, a fire occurred in this building and the damage was so great it was found impracticable to rebuild. Many complaints had previously been received in reference to the sanitary condition of this building and its poorly lighted rooms. Its construction was so out of the ordinary that any changes on modern lines would have been both expensive and unsatisfactory.

The Committee on Public Property very carefully considered the advisability of rebuilding or replacing this building and after consulting with the School Committee deemed it unwise. A structure of suitable size to accommodate the children in this district on this lot would require covering so much of the land that the rooms would be poorly lighted as the lot is nearly surrounded by large buildings which are located near the boundary lines of the schoolhouse lot. To have repaired it would have cost at least $30,000 and the results obtained would not have given a modern building.

Acting on the principle that it would be unwise to rebuild on the old lot the Committee on Public Property recommended the buying of land on Elm Street at the head of Market Street. An order was passed by the City Council and approved July 9, 1902, making an appropriation of $11,000 for the purchase of about 24,000 square feet of land on Elm Street for a sixteen room shoolhouse to take the place of the present site of the Allston school building. Owing to some legal questions arising as to the ownership of the property selected the transfer was not made and the deed delivered until late in the fall. The City caused the old building to be torn down and most of the old material was distributed to the needy in our City.

In December of the present year the City Council passed an order making an appropriation of $500 for the purpose of procuring plans for a new schoolhouse to be located on this property, said plans to be procured by competition, the award to be made by a commission, to consist of the

Mayor, Superintendent of Schools and the Superintendent of Public Buildings. Conditions are being prepared under which a competition will be had for procuring plans. If plans are procured at once so as to start the building early in the spring it will be possible to have it ready for occupancy by January 1, 1904.

NEW BOILERS AT THE RINDGE MANUAL TRAINING SCHOOL.

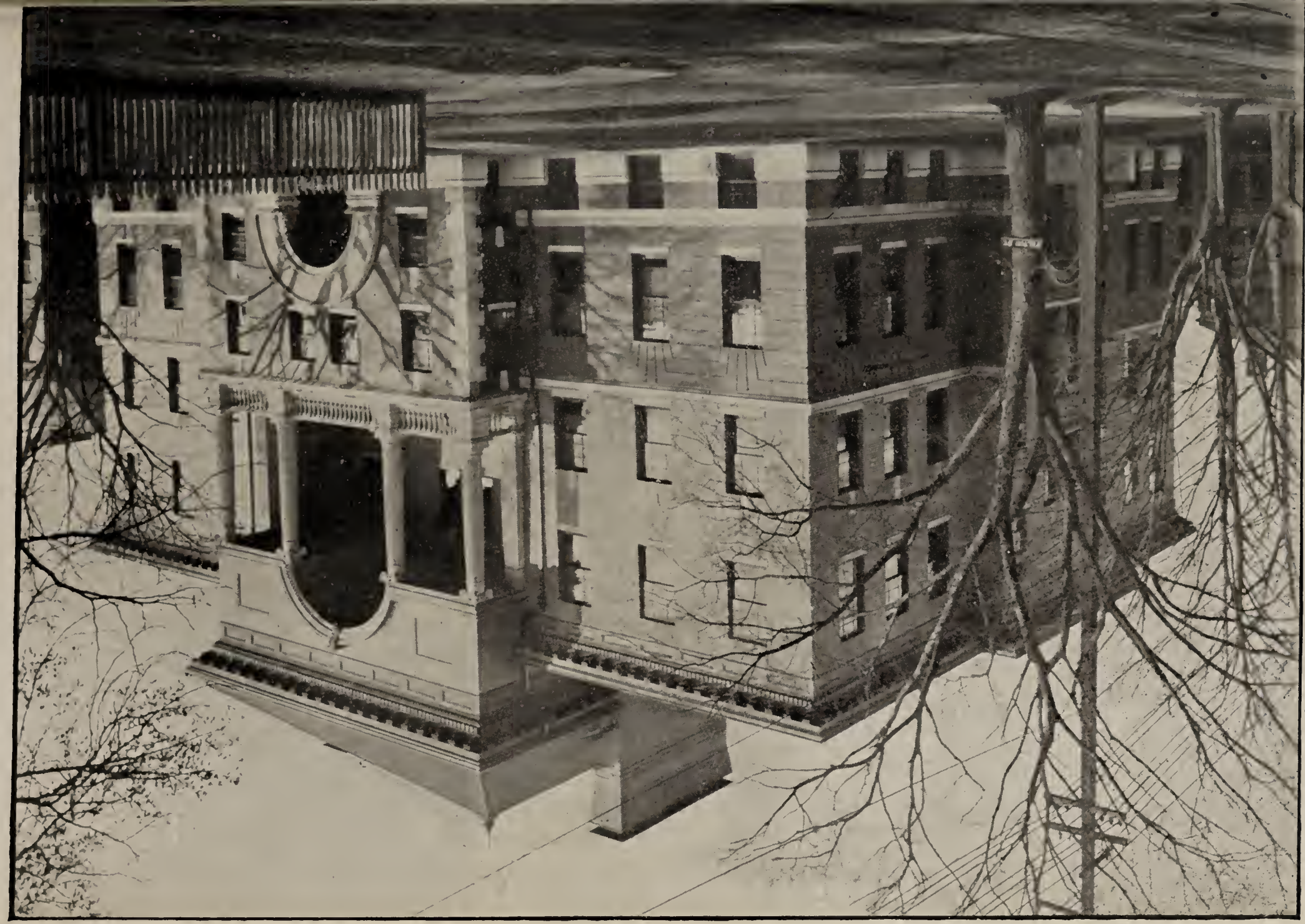
It was deemed advisable to remove the two small boilers that had been in constant use at the Manual Training School ever since this building was erected and substitute two larger ones of sufficient capacity to furnish heat for the entire group of buildings there, including the new Washington School. Bids were called for and the contract awarded to Messrs. Lynch & Woodward, the lowest bidders. During the summer vacation the old boilers were removed and the new ones substituted.

The wisdom of this change has been fully demonstrated the past year by the saving of coal and cost of maintenance. In connection with the new system of heating and ventilating it was found desirable to construct two tunnels connecting the three buildings and making it possible to pass from one building to another without being exposed to the weather. This made possible the running of all steam and water pipes through these tunnels thus affording an opportunity to make all necessary repairs without the inconvenience of digging up the yard.

A portion of this new building is used in connection with the Manual Training School and as the scholars are constantly obliged to go from one building to the other, the present arrangements are fully appreciated both by scholars and teachers. In removing the boilers it was found that it would be necessary to install a new pump, the old one having given out, and also to put in a new feed water heater, the old one being found useless. These changes had to be made after the commencement of the fall term of school, but the work did not interfere with the daily sessions of the school. The plant as installed stands today as one of the best in our City.

NEW SCHOOLHOUSE CORNER OF FELTON AND CAMBRIDGE STREETS.

An order passed the City Council in 1899 authorizing the buying of land corner of Felton and Cambridge Streets for a schoolhouse site and on July 10, 1900, an appropriation of $80,000 was made for the erection of a building thereon which should be similar in its interior arrangements to the Peabody School. Mr. George Fogerty, who had been architect for the Peabody School, was selected as architect for the new building.



Under his direction and supervision plans were prepared and bids were called for on October 11, 1900. Eleven firms submitted estimates, ranging from $127,782 to $98,000, and as the lowest bid exceeded the appropriation by several thousand dollars, all bids were rejected. The reductions were so extensive that it was necessary to procure a new set of plans. From these new plans estimates were called for, and it was found that other changes were necessary in order to reduce the cost of the building so that it could be built within the appropriation. These changes were made a part of the contract and specifications, and on November 17, 1900, the contract for the erection of the building was awarded to Messrs. Fesenden & Libby Co., of No. 34 School Street, Boston. After the contract had been signed, work was immediately begun and progressed without interruption until the firm became financially embarrassed. In January the firm made an assignment for the benefit of its creditors. According to the terms of the contract, notice was served upon the firm to cease work upon the building, and the City took possession of the building on January 17, 1902. Work was entirely suspended until July, when, with the advice of the Mayor, I granted the contractors an extension of time in which to complete the building. Work was soon resumed, and the contract completed and the work accepted November 1, 1902. A portion of the building was used for school purposes in September, but owing to the inability to get certain materials the completion was delayed to the date before mentioned.

It would be impossible to cite the causes which led up to the adverse criticism of this building, and which resulted in such a prolonged and exhaustive investigation, the outcome of which must have been apparent in advance to all fair minded men who are familiar with the erection of such imposing and magnificent buildings. It is conceded by all first-class builders that the school building cannot be duplicated for less than $25,000 more than what the present building has cost the City; and one member of the firm which erected the building has said that that amount would just about represent their loss on the building. And in connection with this it is worthy of note that during my connection with this office the past eight years, and in which term I have erected eleven public buildings at a cost of over $672,000, there has not been a single one of them which yielded a profit to the contractor. Two buildings alone have cost the contractors over $50,000 more than they received for their work, and still the City is able to get estimates when they have a new building to erect, far below the actual cost of the structure. The new Washington School, as it stands today, has no superior, and I doubt if an equal, when we compare the value of its convenience and general arrangements, with what it has cost the City. The schoolhouse contains fourteen class

rooms, twelve of which are corner rooms, one recitation room, sewing room, physics room, library, master's and teachers' rooms, with abundance of closets in every room, and a large assembly hall. There is not a dark spot in the entire building, the rooms, as well as the corridors and stairways, have direct, and an abundance, of light. Every class-room has its own wardrobe, and is provided with marble bowl and running water.

Toilet rooms are located in the basement, and are carefully arranged so as to obtain the best sanitary results, ventilation being provided for by a separate flue properly heated to insure constant draught. The steam heat for this building is furnished from the Manual Training School, as no provision for boilers was made in this building. Every class-room is so arranged that it can be furnished with at least thirty-two cubic feet of fresh air per minute for every scholar. The system of heating is by indirect radiation, supplemented by direct radiation; this portion, however, is only to be used in cases of emergency or extremely cold weather, but either system is of sufficient size to properly heat the building in ordinary weather.

Three main entrances are provided to the building and two stairways running from basement to the roof, with a third stairway running from the first to the second floor. All finish for the interior of the building, with the exception of the basement, is of ash, and all floors throughout the building are of hard pine. The basement floor is of granolithic, having a concrete bed of two inches. Shortly after this portion of the work had been completed, defects appeared in the granolithic, and in December, 1901, the contractors were notified that certain portions of the concrete was defective, and their attention was called to the fact that this portion of the work would have to be improved before it could be accepted by the City. During the summer of 1902 the contractors put an inch of granolithic on top of what had already been put down, and they expressed great confidence that the new work would solidify with the old, and would make a first-class job. At this time I am not prepared to say that it is going to prove a satisfactory solution of the difficulty, but may later on require some repairs upon it. Possibly some of the squares may have to be relaid, but whatever is required the cost will be so small that the City would not be warranted in making a contest over it. I think in a case of this kind that a fair and reasonable interpretation of specifications, and a disposition to be reasonable on the part of both contractors and the City, is more commendable than exacting the pound of flesh.

It may be difficult for those with little or no experience in the supervision and erection of public buildings to fully realize the absolute necessity of making important changes during the construction of a building as the work proceeds. There has never been a structure erected

where there have been no deviations from the original plans. The man is yet unborn who is capable of producing upon paper sketches and plans that cannot be improved upon as work progresses and the supervisor who cannot improve upon them is unfitted to supervise and direct in their construction.

WILLOW STREET SCHOOLHOUSE.

In November, 1901, an appropriation of $80,000 was made for the purpose of erecting a brick schoolhouse on the site of the Willow Street land previously purchased, the price to include the erection and furnishings of the building. The Commission appointed by the City Council, consisting of His Honor, the Mayor, the Superintendent of Schools and the Superintendent of Public Buildings to select a plan from those submitted in competition, after a careful study of the various sketches presented, came to the unanimous conclusion that the plans submitted by Mr. A. H. Gould should be the ones from which the building should be erected and a contract was entered into with him to prepare the plans and specifications.

Under an advertisement of May 20, 1902, estimates were received ranging in price from $87,377 to $65,934. Messrs. F. G. Coburn & Co., were the lowest bidders and after a few minor changes had been made in the plans they were awarded the contract for $64,997.40. After the contract had been signed and a satisfactory bond of $30,000 had been given by the contractors, work upon the excavations was immediately begun and satisfactory progress was made until about the middle of November, when owing to financial embarrassment of the contractors work on the building was suspended and remains so at the present time, although the contract for finishing the building has been awarded to the American Surety Company who propose to finish the building under the same terms and conditions stipulated in the original contract.

Up to the tenth of November the estimate of work done was $22,239, of which amount $16,679.25 or 75 per cent. has been paid, leaving a balance of $48,318.15 in the hands of the City. It is safe to assume that the amount of funds now held by the City is amply sufficient to complete the contract without any loss to the City. This building should be completed and ready for occupancy by the first of September, 1903.

The contract for heating and ventilating the building was awarded to Messrs. Lynch & Woodward, of Boston, for $5,970, they being the lowest bidders. William N. McKenna & Co., of Boston, were awarded the contract for plumbing work on this building for $4,253, they being the lowest bidders for this branch of the work. In the plans for the basement section of this building there is shown a room fitted up with a

swimming tank and all the facilities for bathing, but which is not included in the general contract. It was considered at the time by some of the school committee as rather an innovation in our schoolhouse construction, and rather questionable as to the necessity of introducing the system into our public schools at this time. The wisdom of introducing swimming tanks in our school buildings may be debatable, but the necessity for them is not, for the results that could be obtained through a proper use of the advantages offered would be beneficial both in the homes and the school rooms. I recommend that an appropriation be made and authority given to build a swimming tank with other necessary conveniences in the basement of the Willow Street school, similar to that shown on the plans. If this City is to keep pace with other cities in providing suitable bathing facilities in schoolhouses it would seem that the time has come and the proper place selected where a fair test could be made of the advantages to be had by the introduction of swimming tanks in some of our school buildings.

I recommend that a contract be made to waterproof the boiler room as it has been found since excavations have been made and the fact that the sewer is not low enough in the street to allow of proper drainage, that there will be trouble from water in this portion of the building as the floor in this room is some four feet below the rest of the basement floor. It was hoped when the contract was made that the City would not have to go to this additional expense, but recent developments prove that it will be necessary.

The following table shows the amount of coal consumed in the various school buildings during the past year: —

	Tons
Agassiz	75
Boardman	43
Corlett	16
Cushing	20
Dunster	25
Ellis	125
Felton	53
Gannett	50
Gannett (old)	20
Gore	65
Harvard	175
High	295
Holmes	15
Lassell	34
Latin	355
Lowell	30
Merrill	105
Morse	190
Otis	52
Parker	50
Carried forward	1 793

	Tons.
Brought forward	1,793
Peabody	145
Putnam	140
Reed	25
Rindge Manual Training	385
Riverside	28
Roberts	155
Russell	110
Sargent	35
Shepard	70
Sleeper	75
Stearns	35
Tarbell	30
Taylor	120
Thorndike	80
Washington	90
Webster	150
Wellington	135
Willard	60
Wyman	45
	3,706

REAL ESTATE BELONGING TO THE CITY.

SCHOOLHOUSES.

	Feet of Land.	Purchase of Land.	Erection of Building.	Valuation of Land.	Valuation of Building.	Valuation of Furniture.
Agassiz	19,689	1874	1875	$8,000	$20,000	$1,215
Allston	15,193	1857	1857 1873 remodelled	4,600	30,000	1,795
Boardman	10,018	1866	1868	4,000	13,000	1,290
Bridge	4,646	1836	1836	1,400	500	.....
Corlett	10,000	1880	1880 purchased	1,200	3,000	195
Cushing	14,787	1880	1880 purchased	1,500	3,000	136
Dana	14,317	1847	1848	4,300	2,000	100
Dunster	10,009	1857	1871 remodelled	3,000	3,000	261
Ellis	25,700	1897	1898	6,000	48,000	2,993
Felton	15,090	1847	1848	4,500	6,000	200
Gannett	15,434	1876	1886	3,000	12,000	430
Gannett (old) / Wellington	27,673	1864 1875	1865 1884	2,600 5,700	2,000 50,000	395 2,240
Gore	9,900	1871	1871	4,000	50,000	825
Harvard	20,494	1870	1871 burned 1899 rebuilt	12,000	65,000	3,769
High	74,366	.....	1891	40,900	220,000	9,220
Holmes	11,182	1870	1870	5,000	5,500	275
Lassell	10,000	1880	1880	3,000	8,000	272
Latin	79,759	1894	1897	43,800	225,000	27,150
Lowell	12,033	1883	1883	3,600	5,500	402
Merrill	37,828	1861 1864	1864	19,000	45,000	1,425
Morse	25,650	1889	1890	7,000	73,000	2,040
Otis	8,270	1842 1857 1858	1859 1870 remodelled	4,000	20,000	930
Parker	12,319	.....	1893	7,000	15,000	710
Peabody	21,813	1887	1888 1898 enlarged	9,800	68,000	3,340
Putnam	14,400	1825 1847 1896	1825 removed 1847 torn down 1889 rebuilt	9,800	64,500	2,550
Reed	12,000	1868	1868	1,200	4,000	310
Rindge, M. T.	81,128	.....	1887	44,000	56,000	8,000
Riverside	11,198	1868	1868	3,000	5,000	330
Roberts	16,400	1898	1898	12,000	48,000	3,003
Russell	33,073	1895	1896	6,000	40,000	2,440
Sargent	9,995	1838	1838	5,000	3,000	255
Shepard	14,755	1855	1856 1873 enlarged	11,000	26,000	1,047
Sleeper	21,284	1894	1894	5,000	24,000	1,190
Stearns	10,050	1812	1841 burned 1843 rebuilt	5,000	3,000	322
Tarbell	19,500	1878	1882	4,900	7,000	355
Taylor	23,592	1894	1895	6,000	36,000	1,720
Thorndike	10,027	1860	1860 1875 remodelled	4,000	30,000	1,676
Washington	14,951	1851	1851 1871 remodelled 1878 altered	10,000	25,000	500
Wash'gton (new)	16,000	1900	1901	12,800	80,000	3,500
Webster	25,839	1852 1866 1889	1852 1873 remodelled 1885 enlarged	9,000	50,000	3,550
Willard	20,079	1869	1870	7,000	25,000	1,350
Wyman	14,347	1871	1871 1886 addition	4,500	5,000	555
				$369,100	$1,524,000	$94,261

CITY BUILDINGS.

	Feet of Land.	Purchase of Land.	Erection of Building.	Valuation of Land.	Valuation of Building.	Valuation of Furniture.
City Hall	47,878	1888	1888	$72,000	$200,000	$29,800
Brattle Sq. Bldg.	16,153	1873	1874	16,000	60,000	2,500
Central Sq. Bldg.	13,028	1872	1873	10,500	50,000	2,436
Station 3	4,220	1862	1870	2,100	20,000	800
Ward 5 Bldg.	6,316	1872	1873	3,700	5,300	300
				$104,300	$335,300	$35,836

SCHOOLHOUSES—CARE AND REPAIRS.

Schools.	Fuel	Light.	Repairs.	Supplies.	Extra Labor.	Janitor.	Totals.
Agassiz	$132 10	$5 30	$175 14	$4 15	.....	$624 00	$940 69
Allston	.....	83 93	140 69	10 38	.....	65 00	300 00
Boardman	124 70	8 60	89 50	12 52	.....	624 00	859 32
Corlett	58 52	.....	37 25	4 50	.....	260 00	360 27
Cushing	62 92	.....	72 09	7 40	.....	260 00	402 41
Dunster	27 30	.....	256 66	2 00	.....	416 00	701 96
Ellis	448 80	4 70	339 51	56 25	.....	832 00	1,681 26
Felton	100 35	8 40	65 28	50	.....	416 00	590 53
Gannett	29 75	3 80	118 66	7 50	.....	520 00	679 71
Gannett (old)	27 30	1 00	49 95	50	.....	312 00	390 75
Gore	192 15	23 50	174 36	6 30	.....	780 00	1,176 51
Harvard	514 20	8 90	214 27	21 74	.....	1,196 00	1,955 11
High	1,309 74	448 93	517 87	84 74	$675 13	1,800 00 806 00	5,642 41
Holmes	4 00	13 80	202 67	4 55	.....	364 00	589 02
Lassell	89 70	.....	172 67	19 05	.....	416 00	697 42
Latin	1,443 61	315 13	479 90	61 10	280 00	1,800 00 1,040 00	5,419 74
Lowell	4 00	5 30	107 77	1 55	.....	364 00	482 62
Merrill	292 75	2 80	275 54	206 95	2 25	780 00	1,560 29
Morse	327 15	20 90	700 17	318 10	69 75	1,144 00	2,580 07
Otis	89 75	22 50	121 38	4 25	.....	624 00	861 88
Parker	152 65	8 20	354 50	18 82	.....	520 00	1,054 17
Peabody	660 60	21 25	157 88	3 13	.....	1,144 00	1,986 86
Putnam	360 75	172 46	527 35	155 21	.....	1,144 00	2,359 77
Reed	30 75	.....	74 46	9 00	.....	416 00	530 21
Rindge, M. T.	1,719 74	398 82	343 77	210 21	210 00	1,425 00 998 40	5,305 94
Riverside	221 46	.....	90 89	6 85	.....	390 00	709 20
Roberts	433 40	80 30	373 12	104 90	.....	832 00	1,823 72
Russell	407 10	18 90	539 22	56 75	.....	832 00	1,853 97
Sargent	74 08	21 80	314 01	16 50	.....	594 00	1,020 39
Shepard	156 75	25 55	253 54	6 00	.....	780 00	1,221 84
Sleeper	130 70	1 30	108 11	87 55	.....	624 00	951 66
Stearns	39 35	12 00	320 58	19 50	.....	364 00	755 43
Tarbell	47 50	.....	65 06	50	.....	390 00	503 06
Taylor	346 87	11 80	968 01	14 44	.....	780 00	2,121 12
Thorndike	135 70	50 10	755 81	19 61	30 60	728 00	1,719 82
Washington	.....	.....	934 19	605 51	50 50	207 00	1,797 20
Washington (old)	277 25	50 30	149 49	27 95	.....	780 00	1,284 99
Webster	231 93	95 73	132 46	23 35	.....	1,040 00	1,523 47
Wellington	381 40	20 20	404 56	135 65	.....	780 00	1,721 81
Willard	226 25	24 30	204 43	4 20	.....	780 00	1,239 18
Wyman	64 85	.....	107 38	.....	.....	520 00	692 23
All Schools	.....	92 38	774 08	1,636 24	861 00	416 00	3,779 70
	$11,377 87	$2,082 88	$12,264 23	$3,995 90	$2,179 23	$31,927 40	$63,827 51

INSPECTION OF BUILDINGS.

An inspector of buildings has become an important factor in connection with the interests of the City, and he must, or should be, selected with certain qualifications. He should be a man of practical knowledge as well as theoretical, his familiarity with various kinds of material which enter into the construction of a building, his ability to figure correctly the strains on the different members of a truss and his confidence in his ability to correctly read plans and pass upon them should be leading features in the qualifications for his selection to the office. To such a man the position becomes a pleasant and satisfactory one, having the assurance that he is honestly performing his duty and that the confidence of the public is in sympathy with him in the performance of his arduous duties.

The following table gives the number of inspections made by this department the past year: —

Inspections	4,117
Inspections of buildings to be moved	5
Inspections of chimneys	514
Plans rejected	3
Dangerous chimneys	14
Defective construction in fire places	17
Foundations condemned	4
Foundations ordered relaid	6
Changes ordered in furnaces and steam pipes	26
Changes ordered in plans submitted	58
Permits cancelled	13
Building without a permit	14
Buildings too near adjoining lot	7
Defective conductors and gutters	19
Building in a dangerous condition	12
Notices served on violaters of building ordinance	33

The following table shows the number of permits granted in each Ward and the use for which they are intended: —

Buildings.	WARDS.										
	1	2	3	4	5	6	7	8	9	10	11
Additions	10	7	10	31	16	23	13	24	21	22	24
Alterations and repairs	7	3	11	9	7	21	13	9	12	5	5
Apartments and dwellings	.....	1	7	1	5	1	4	2	34	12	13
Carriage houses	4	.....	1	5	1	1	4	2	1	1	2
Chimneys	.....	1	.....	.....	1	.....	1	.....	1	.....	2
Dwellings and stores	.....	.....	2	.....	.....	.....	.....	2	.....	.....	1
Dynamos and motors	3	1	.....	10	.....	10	3	3	4	2	2
Factories	1	.....	.....	2	.....	3	.....	.....	.....	.....	.....
Foundations	.....	.....	2	.....	3	1	4	1	14	3	6
Heating apparatus	.....	.....	.....	1	1	.....	2	.....	1	4	.....
Stables	2	.....	2	.....	.....	2	.....	.....	1	1	4
Stores and offices	1	1	1	.....	1	2	4	.....	3	.....	1
Storehouses	3	1	2	.....	1	.....	1	1	.....	3	1
Torn down	4	2	.....	5	2	2	2	1	3	.....	1
Miscellaneous	6	.....	1	4	1	11	3	9	5	2	1
Totals	41	17	39	68	39	77	54	54	100	55	63

Of the foregoing permits, 561 were issued for wooden structures and 46 for brick and stone, making a total of 607.

BRICK BUILDINGS.

Additions	12	*Brought forward*	30
Alterations and repairs	5	Dormitories	3
Apartment houses	6	Factories	4
Apartments and stores	3	Lecture Hall	1
Armory	1	Power House	1
Book Bindery	1	Repair Shop	1
Church	1	Stores	4
Clubhouse	1	Storehouses	2
Carried forward	30	Total	46

Number of permits granted for each month for the years 1901 and 1902: —

	1901.	1902.
December	24	37
January	24	36
February	20	18
March	53	56
April	62	83
May	72	73
June	59	70
July	55	55
August	59	53
September	49	45
October	50	36
November	40	45
Totals	567	607

COST OF BUILDINGS ERECTED IN 1902.

	Ward 1.		Ward 2.		Ward 3.		Ward 4.		Ward 5.		Ward 6.	
	New.	Additions and Repairs.	New.	Additions and Repairs.	New.	Additions and Repairs	New.	Additions and Repairs.	New.	Additions and Repairs	New.	Additions and Repairs.
December	.....	$2,500	.....	$300	$20,000	$1,100	.....	$250	$6,000	$6,650	.....	$875
January	.....	1,425	.....	50	300	.....	.....	2,700	.....	.....	.....	2,250
February	.....	.....	.....	15,500	.....	.....	$6,000	1,300	.....	.....	.....	20
March	$75	225	$500	.....	50	.....	1,565	2,450	.....	650	$150	1,200
April	500	5,250	4,300	1,200	15,600	425	13,500	1,200	.....	2,100	52.800	4,800
May	25	500	100	.....	7,700	6 450	.....	70	16,500	1,250	20,000	4.450
June	76,300	1,500	150	.....	8,500	.....	.....	1,100	140,050	2,225	1,000	10,710
July	125,000	250	.....	500	.....	600	.....	6,825	3,000	2,300	1,400	1,975
August	.....	.....	.....	.....	21,800	1,175	500	13,780	1,875	50	7,200	7.100
September	100,800	.....	.....	2,000	200	600	1,400	1,050	50	10,200	210,000	1,265
October	.....	3,600	.....	1,150	450	.....	1,000	1,475	.....	515	25,250	25
November	20,100	1,775	.....	.....	95,790	875	100	3,400	.....	60	.....	1,450
Totals	$322,800	17,025	$5,050	$20,700	$170,390	$11,225	$24,065	$35,600	$167,475	$26,000	$317,800	$36,120

COST OF BUILDINGS ERECTED IN 1902— *Continued.*

	Ward 7.		Ward 8.		Ward 9.		Ward 10.		Ward 11.		Totals.	
	New.	Additions and Repairs.	New.	Additions and Repairs.	New.	Additions and Repairs.	New.	Additions and Repairs.	New.	Additions and Repairs.	New.	Additions and Repairs.
December...	$40	$315	.....	$30,950	$2,000	$5,900	$27,500	$300	.....	$250	$55,540	$49,390
January	40,000	100	$100,625	43,100	16,500	500	.....	360	$2,200	3,110	159,025	53,595
February ...	.....	25	25	2,800	5,700	400	1,500	.....	.....	150	13,225	20,195
March	50	1,350	25	6,100	3,600	900	5,400	1,940	425	1,785	11,840	16,600
April	20,000	975	8,040	3,925	10,550	1,850	10,175	825	3,750	1,605	139,215	24,155
May.....	50	1,580	80,000	6,650	14,125	400	9,400	4,095	14,375	700	162,275	26,145
June	100,000	5,805	8,025	830	12,500	625	.....	1,875	5,300	2,100	351,825	26,770
July.....	16,850	3,575	.....	6,350	43,000	2,700	34,500	500	30,830	650	254,580	26,225
August	.....	6,955	22,000	2,700	74,300	1,360	2,650	800	200	.....	130,525	33,920
September ..	15,030	400	80,000	175	8,500	5,875	100	2,000	.....	1,790	416,080	25,355
October	.....	.....	.....	3,940	42,550	1,325	.....	60	.....	600	69,250	12,690
November ..	50	1,120	.....	.....	11,000	650	5,800	25	11,500	250	144,340	9,605
Totals....	$192,070	$22,000	$298,140	$107,520	$244,325	$22,485	$97,025	$12,780	$68,580	$12,990	$1,907,720	$324,645

INSPECTION OF PLUMBING.

Mr. C. H. M. Hunnewell has had charge of this department since 1897, and his faithful and conscientious work is convincing proof that the City has in him a valuable servant. The selection of Mr. Hunnewell as Inspector of Plumbing was occasioned by the fact that his predecessor sent in his resignation, the same to take effect upon receipt of the letter, Mr. Hunnewell passed a very creditable Civil Service examination and was appointed to fill the position made vacant through the resignation of Mr. William Ford. Up to the time of Mr. Ford's resigning the department had never met Mr. Hunnewell, but he brought with him the highest testimonials from former employers and the department is satisfied that the selection of Mr. Hunnewell was a wise and beneficial one for the City. He is not only interested in his work, but is ever watchful to detect imperfect sanitation in our private, as well as public buildings. Following is his report to this department: —

Applications and permits granted	710
Inspections and tests	1,445
Defective work and violations of the plumbing ordinance	27
Permits cancelled	5
Master plumbers registered	28
Master plumbers holding certificates	35
Journeymen plumbers holding certificates	60
Master Plumbers holding licenses	29
Journeymen plumbers holding licenses	34
Master plumbers granted new licenses	3
Journeymen plumbers granted new licenses	6
Master plumbers licenses cancelled	2
Journeymen plumbers licenses cancelled	5
Master plumbers licenses renewed	25
Journeymen plumbers licenses renewed	23
Cash received from new licenses and renewals	$33 00

In conclusion I desire to say that it is a great pleasure to recall the cordial relations which have existed between the Committee on Public Property and this department. For their patient consideration on matters of public interest, ready at all times to offer their advice and willing to lend their support in the interest of public good, I desire to tender my heartfelt and sincere thanks, and trust that the City will always have rendered to her the same faithful service, for which she can ever be truly grateful.

Respectfully submitted,

WM. H. GRAY,
Superintendent of Public Buildings.

REPORT OF INSPECTOR OF ANIMALS

To the Honorable, the City Council: —

Gentlemen: — In compliance with the City Ordinance, I have the honor to present my annual report of Inspector of Animals and Veterinarian for the City of Cambridge, for the year ending November 30, 1902.

After a general inspection of the cows of the City had been made, one case of tuberculosis was found and the cow killed. There were no cases of foot and mouth disease.

I have examined 225 horses in stables where there have been cases of glanders.

Number of horses quarantined	30
" " " killed	27

The City horses have been free from any contagious disease.

I have made in all 520 visits, and examined 10 horses for soundness.

Appropriation		$800 00
Salary	$700 00	
A. Cunningham	17 65	
W. A. Claflin	59 35	
Balance on hand	23 00	
		$800 00

Thanking His Honor, the Mayor, and members of the City Council I am,

Very respectfully yours,

CHARLES E. HADCOCK, M. D. V.,
Inspector of Animals and Veterinarian.

November 30, 1902.

REPORT OF THE CITY TREASURER

City of Cambridge,
Office of City Treasurer, December 1, 1902.

To the Honorable, the City Council:—

In the following pages I submit a detailed report of the receipts and expenditures of the public funds by the Treasury Department, during the year ending November 30, 1902, including an account of all bonded and temporary loans negotiated in said year; also a detailed account of official fees received and reports on the Cemetery Fund and the Sarah E. Russell Fund.

Very respectfully,

WM. W. DALLINGER,
City Treasurer.

City of Cambridge in Account Current from December 1, 1901, to

Dr.

To authorized payments charged to City Accounts: —	
Abatements — Taxes	$33,047 28
Assessors' Department	13,359 14
Auditing Department	3,787 79
Board of Survey	141 31
Bridge Department	40,309 69
Cambridge Bridge	201,855 55
Cemetery Department	18,309 19
Cemetery Fund	3,661 50
City Clerk's Department	7,977 00
City Messenger's Department	2,721 09
Civil Service Department	269 45
Clerk of Committees Department	3,955 48
Contingent Fund	12,872 39
Election Expenses: —	
City Clerk	6,218 76
Registrars of Voters	3,129 38
Superintendent of Buildings	1,964 95
Electrical Department: —	
Street Lighting	74,299 45
Wires	9,972 34
Engineering Department	9,906 46
Assessors' Plans	229 35
Executive Department	5,356 29
Fire Department	93,223 49
Health Department	71,577 00
Inspection of Milk and Vinegar	1,683 58
Inspection of Provisions	780 85
Interest	164,606 76
Land Damages	35,599 24
Law Department	4,957 79
Loan: —	
Temporary	500,000 00
Street	55,000 00
School House	20,000 00
Paving	50,000 00
Building	20,000 00
Overseers of the Poor Department: —	
City Home	20,356 04
Farm	5,252 55
House Offal	27,868 61
Outside Aid	42,849 58
Salary of City Physician	1,500 00
Park Department: —	
Construction and Lands	63,190 53
Interest on Park Loan	49,880 00
Maintenance	28,460 32
Sinking Fund	22,541 67
Plumbers' Examiners Department	115 00
Police Department	131,151 88
Public Library Department: —	
Addition to Building	28,308 89
Current Expenses	17,612 88
East Cambridge Branch	1,370 39
Public Property: —	
City Buildings—Care and Repairs	17,298 56
Incidentals	6,316 49
School Houses — Care and Repairs	62,354 39
Rifle Range	341 28
Voting Booth	395 00
New Schoolhouse—Ward 1	3,390 42
Sanitary Arrangements, Schoolhouses	615 08
New Schoolhouse—Willow Street	18,958 66
Armory on Beech Street	61 00
Land for Schoolhouse—Elm Street	11,257 75
School Department: —	
Care of Truants	1,853 67
Flags	121 65
Incidentals	1,562 92
Salaries	349,986 25
Amount carried forward	$2,385,744 01

Nov. 30, 1902 (inclusive), with Wm. W. Dallinger, City Treasurer.

Cr.

By receipts as follows: —

Betterments: —	
Inman Court	$173 00
Pleasant Street	938 15
Bridge Department	3,533 76
Cemetery Department	19,944 68
Cemetery Fund	3,661 50
City Clerk's Department	2,784 68
City Messenger's Department	67 54
Commissioners of Sinking Funds	145,000 00
Contingent Fund	296 00
Election Expenses: —	
Superintendent of Buildings	884 00
Electrical Department: —	
Street Lighting	35
Wires	167 66
Fire Department	130 00
Health Department	4,976 43
Inspection of Milk and Vinegar	145 50
Interest	12,260 30
Law Department	525 00
Loan: —	
Temporary	520,000 00
Sewer	20,000 00
Park	48,000 00
Cambridge Bridge	100,000 00
City	58,000 00
Street	44,000 00
Water	18,500 00
Schoolhouse	97,500 00
Metropolitan Park Assessment	46,000 00
Hospital	6,000 00
Overseers of the Poor Department: —	
City Home	904 84
Farm	5,098 37
House Offal	9,722 83
Outside Aid	3,692 64
Park Department: —	
Construction and Lands	1,024 40
Maintenance	979 75
Park Betterments	2,905 62
Plumbers' Examiners Department	33 00
Police Department	4,757 16
Premium Account	16,721 25
Public Library Department: —	
Current Expenses	5,208 60
Public Property: —	
City Buildings—Care and Repairs	4,761 30
Schoolhouses—Care and Repairs	110 75
Land for Schoolhouse—Elm Street	258 10
School Department: —	
Salaries	8,030 81
Text-books and Supplies	516 50
Sealer of Weights and Measures	932 03
Sewer Department: —	
Construction—General	5,713 49
Maintenance	68 15
State Aid	15,289 12
Stationery and Printing	1,003 67
Amount carried forward	$1,241,220 93

CITY OF CAMBRIDGE IN ACCOUNT CURRENT FROM DECEMBER 1, 1901, TO

Dr.

Amount brought forward	$2,385,744 01
Text-books and Supplies	17,802 98
Transportation of Pupils	255 00
Vacation Schools	1,066 79
Sealer of Weights and Measures	2,667 17
Sewer Department: —	
Construction — General	7,666 93
Improved Sewerage	60,835 13
Maintenance	18,261 83
Sinking Fund: —	
Cambridge Bridge	4,666 67
Clay Lands	5,335 00
General	111,050 99
Harvard Bridge	9,500 00
Improved Sewerage	5,747 50
State Aid	25,474 05
Stationery and Printing	899 67
Street Department: —	
Bridges	3,513 55
Cleaning Streets	30,048 33
Collection of Ashes	28,756 03
Construction: —	
Belmont Street	1,939 79
Clark Street	190 43
Dudley Street	3,499 84
Granite Street	1,402 12
Inman Court	117 69
Munroe Street	3,973 04
Pleasant Street	2,347 50
Reed Street	3,974 83
Sherman Street	9,496 90
Sundry Streets, Wards 6 and 7	1,769 00
Sundry Streets, Ward 11	3,308 48
Wright Street	1,149 82
Maintenance	71,930 10
Paving—Crossings and Repairs	9,997 85
Paving—Edgestones and Sidewalks	25,289 26
Rebuilding Streets: —	
Bridge Street	16,382 75
Broadway	4,181 31
Brookline Street	6,606 75
Cambridge Street	4,164 73
Franklin Street	4,997 03
Massachusetts Avenue	10 20
Mount Auburn Street	87 40
Pearl Street and Harvard Square	285 00
River Street	10,000 00
Watering	28,731 64
Tax: —	
Armory	4,154 46
County	100,184 86
Metropolitan Park	96,478 96
Metropolitan Sewer	78,252 17
National Bank	7,802 80
State	47,820 00
Street Railway	466 63
Tax Lien Account	3,523 60
Treasury Department	15,572 47
Water Works Department: —	
Construction	32,194 34
Interest on Water Loan	129,579 00
Maintenance	66,526 09
Abatements	3,985 63
Refunds	3,000 00
Sinking Funds	123,000 29
Total Payments	$3,647,666 39
Cash Balance in Treasury, November 29, 1902	257,194 90
	$3,904,861 29

Nov. 30, 1902 (INCLUSIVE), WITH WM. W. DALLINGER, CITY TREASURER.

Cr.

Amount brought forward		$1,241,220 93
Street Department: —		
Maintenance	2,352 55	
Paving—Edgestones and Sidewalks	10,456 11	
Watering	17,795 55	
Tax: —		
Corporation	82,070 84	
National Bank	17,331 54	
Street Railway	69,747 61	
Tax Lien Account	7,005 00	
Taxes: —		
1896	88 16	
1897	196 95	
1898	446 72	
1899	1,584 17	
1900	6,530 55	
1901	312,320 19	
1902	1,454,478 96	
Treasury Department	2,931 33	
Water Works Department: —		
Construction	1,474 15	
Maintenance	336,682 11	
Total Receipts		$3,564,713 42
Cash Balance in Treasury, November 30, 1901		340,147 87
		$3,904,861 29

TEMPORARY LOANS IN ANTICIPATION OF TAXES, NEGOTIATED IN THE YEAR ENDING NOVEMBER 30, 1902.

Date.	Maturity.	Amount.	
1902	1902		
February 1 ...	October 10....	$100,000	Discounted at 3 375 per cent. per annum.
March 4....	October 13....	25,000	" " 3.375 " "
March 6....	October 13....	25,000	With interest " 3.47 " "
March 6....	October 13....	25,000	" " " 3.47 " "
April 7.. .	October 13....	25,000	" " " 3.55 " "
April 7....	October 13....	25,000	" " " 3.55 " "
April 7....	October 13....	25,000	" " " 3.55 " "
April 30...	October 14...	25,000	" " " 3.53 " "
April 30...	October 14....	25,000	" " " 3.53 " "
April 30....	October 14....	25,000	" " " 3.53 " "
May 20....	October 15....	25,000	Discounted " 3.79 " "
May 20....	October 15....	25,000	" " 3.79 " "
May 20....	October 15....	25,000	" " 3.79 " "
August 13....	October 17....	25,000	" " 4.20 " "
August 13....	October 17....	25,000	" " 4.20 " "
August 13....	October 17...	25,000	" " 4.20 " "
August 13....	October 17....	25,000	" " 4 20 " "
		$500,000	Average interest rate 3.712 per cent.

These loans were all paid before the close of the financial year.

In addition to the foregoing loans, there has been negotiated under date of November 29, 1902, a note for $20,000, required to meet the appropriations for the financial year. The note bears interest at 4½ per cent. per annum, maturing May 1, 1903, and is to be paid from the present uncollected taxes of 1902, collected prior to said date. The note is held by Commissioners of Sinking Funds of Cambridge, Mass.

PARTICULARS CONCERNING THE BONDS NEGOTIATED DURING THE YEAR ENDING NOVEMBER 30, 1902.

Date of Bond.	Amount.	Loan.	Years to Run.	Rate of Interest.	Purchaser.	Price Paid.	Basis.
1902							
July 1...	$38,000	City.....	10	3½	Estabrook & Co	101.84	3.21
July 1...	6,000	Hospital.....	20	3½	Estabrook & Co.....	104.29	3.21
July 1...	86,500	Schoolhouse.....	20	3½	Estabrook & Co.....	104.29	3.21
July 1...	30,000	Street.....	20	3½	Estabrook & Co.....	104.29	3.21
July 1...	13,500	Water	20	3½	Estabrook & Co.....	104.29	3.21
July 1...	48,000	Park	40	3½	Estabrook & Co.....	106.85	3.21
Aug. 1...	50,000	Cambridge Bridge	40	3½	Merrill, Oldham & Co.....	104.57	3.30
Aug. 1...	50,000	Cambridge Bridge	40	3½	Merrill, Oldham & Co.....	104.57	3.30
Aug. 1...	46,000	Metropolitan P'k Assessment... ..	30	3½	Merrill, Oldham & Co.....	103.79	3.30
Oct. 1...	11,000	Schoolhouse.....	20	3½	City Treasurer of Cambridge.... Trustee for the Cemetery Fund .	Par	3.50
Nov. 1...	20,000	City.....	10	3½	Commissioners of Sinking Funds of Cambridge, Mass.....	Par	3.50
Nov. 1...	5,000	Water	20	3½	Merrill, Oldham & Co.....	102.91	3.30
Nov. 1...	14,000	Street	20	3½	Merrill, Oldham & Co.	102.91	3.30
Nov. 1...	20,000	Sewer	30	3½	Merrill, Oldham & Co.	103.79	3.30
	$438,000						

RECAPITULATION.

Cambridge Bridge Loan	$100,000	Schoolhouse Loan	$97,500
City Loan	58,000	Sewer Loan	20,000
Hospital Loan	6,000	Street Loan	44,000
Park Loan	48,000	Water Loan	18,500
Metropolitan Park Assessment Loan	46,000		
		Total issue	$438,000

FEES.

During the year the Treasurer has received official fees amounting to $2,931.33, itemized as follows: —

Summonses to delinquents	$1,227 00	
Preparing advertisements of sale	461 50	
Advertisements of sale	620 13	
Posting notices of sale	306 20	
Making tax deeds	292 00	
Recording of affidavits	24 50	
		$2,931 33

These fees were all turned into the City Treasury as received.

CEMETERY FUND.

Received during the year ending November 30, 1902, from proprietors of lots in Cambridge Cemetery	$3,661 50	
Received in 1902 for a Deed in Trust to the City.	30 00	
Which added to amount of Fund December 1, 1901	54,543 18	
Makes the present amount		$58,234 68

The interest received on the Fund for the year was $1,975.02, which has been paid to the Commissioners of the Cambridge Cemetery for the care of all lots placed in perpetual care.

The assets of the Fund, as of November 29, 1902, are invested as follows, viz.: —

Registered bonds of the City of Cambridge amounting to	$55,400 00	
Deposited in Cambridgeport Savings Bank	2,834 68	
		$58,234 68
Fund for perpetual care of lots is	$58,102 68	
Fund for Deeds in Trust is	132 00	
		$58,234 68

This Fund is held in trust by the City Treasurer.

SARAH E. RUSSEL FUND.

This is a fund bequeathed by the late Sarah E. Russell, of Cambridge, in 1898, "the income therefrom to be annually expended in or towards providing a Christmas tree or Christmas gifts and entertainments for the inmates at the time of the Cambridge Almhouse."

The amount of the bequest was $814.41, and was deposited in the Cambridgeport Savings Bank, where it now remains.

The interest accummulations to November 30, 1902, will be handed to Capt. M. L. Eldridge, Warden of the City Home, to be used at the approaching Christmas, as stipulated in the will of Mrs. Russell.

Very respectfully,

WILLIAM W. DALLINGER,
City Treasurer

REPORT OF THE COMMISSIONERS OF SINKING FUNDS

To the Honorable, the City Council: —

The Commissioners of the Sinking Funds of the City herewith submit their annual report, covering the year ending November 30, 1902.

Under the operation of the amended Ordinance our report shows the condition of all the Sinking Funds of the City, both Municipal and Water.

The following is the condition of the strictly Municipal Loan Funds:—

DR.

The amount of the Funds, November 30, 1901, was	$1,041,852 36	
Received from the City of Cambridge, by its Treasurer, the annual requirements as appropriated by the City Council for the different loans	158,841 83	
Interest received on invested funds	42,852 95	
Premium received on bonds sold	9 00	
		$1,243,556 14

CR.

Paid the Treasurer of the City of Cambridge amount necessary to meet Building Loan Bonds maturing May 2, 1902	$20,000 00	
Paid the Treasurer of the City of Cambridge amount necessary to meet Street Loan Bonds maturing May 2, 1902	55,000 00	
Paid the Treasurer of the City of Cambridge amount necessary to meet Paving Loan Bonds maturing November 1, 1902	50,000 00	
Paid the Treasurer of the City of Cambridge amount necessary to meet Schoolhouse Loan Bonds maturing November 1, 1902	20,000 00	
Paid premiums on investments purchased	2,610 40	
Paid accrued interest on investments purchased	690 65	
Leaving the amount of the Funds, November 30, 1902, all securities enumerated at par	1,095,255 09	
		$1,243,556 14

The following is the condition of the Water Loan Funds: —

DR.

The amount of the Fund, November 30, 1901, was	$757,731 54	
Received during the year as follows: —		
From the Treasurer of the City of Cambridge, the annual required appropriation from the water rates, including surplus, viz.:	123,000 29	
From interest on investments	28,933 82	
		$909,665 65

Cr.

Amount paid for accrued interest on investments purchased	$606 17	
Amount paid for premiums on investments purchased	1,423 50	
Leaving the amount of the Fund, November 30, 1902	907,635 98	
		$909,665 65

Below we give a list of the investments of both Funds: —

The following are the investments belonging to the Municipal Funds: —

			Maturing		
Cambridge	Note,	4½s,	May 1, 1903	$ 20,000 00	
"	City Bonds,	6s,	July 1, 1903	2,000 00	
"	" "	6s,	July 1, 1904	100,000 00	
"	" "	6s,	July 1, 1905	63,000 00	
"	" "	3½s,	Nov. 1, 1909	32,000 00	
"	" "	3½s,	Nov. 1, 1911	36,000 00	
"	" "	3½s,	Nov. 1, 1919	18,000 00	
"	" "	3½s,	Nov. 1, 1921	27,000 00	
"	" "	3½s,	Nov. 1, 1929	42,000 00	
					$340,000 00
Brockton	" "	4s,	June 1, 1903	4,000 00	
"	" "	4s,	Dec 1, 1903	4,000 00	
"	" "	4s,	June 1, 1904	4,000 00	
Quincy	" "	4s,	July 1, 1904	7,500 00	
Lawrence	" "	4s,	July 1, 1904	12,000 00	
Pawtucket, R. I.	" "	4s,	July 1, 1904	15,000 00	
Hopkinton	Town "	4s,	Sept. 30, 1904	5,000 00	
Brockton	City "	4s,	Dec. 1, 1904	4,000 00	
Quincy	" "	4s,	July 1, 1905	7,000 00	
Haverhill	" "	4s,	Oct. 1, 1905	50,000 00	
Brockton	" "	4s,	Dec. 1, 1905	4,000 00	
Gloucester	" "	4s,	May 1, 1906	2,000 00	
Quincy	" "	4s,	July 1, 1906	1,000 00	
Fitchburg R. R. Co.		4s,	April 1, 1907	50,000 00	
Watertown	Town "	3½s	Jan. 1, 1908 to 1922	85,000 00	
Somerville	City "	4s,	July 1, 1908	8,000 00	
Belmont	Town "	4s,	Oct. 1, 1908	15,000 00	
Medford	City "	4s,	Dec. 15, 1908	10,000 00	
New Bedford	" "	3½s,	Feb. 1, 1909	40,000 00	
Pawtucket, R. I.	" "	4s,	July 1, 1909	30,000 00	
Beverly	" "	4s,	July 1, 1911	9,000 00	
Medford	" "	4s,	July 1, 1911	26,000 00	
Boston & Lowell R. R Co.		4s,	Feb 1, 1913	1,000 00	
Allegheny, Pa.	City Bonds	3½s,	Oct. 1, 1914-1915-1916	66,000 00	
Medford	" "	4s,	July 1, 1915	23,000 00	
Melrose	" "	4s,	Feb. 24, 1916	10,000 00	
Brockton	" "	3½s,	July 1, 1916	5,000 00	
Boston & Lowell R. R. Co.		4s,	July 1, 1916	10,000 00	
Fitchburg R R Co.		4s,	July 1, 1916	10,000 00	
Marlborough	City Bonds	4s,	July 1, 1918	10,000 00	
Medford	" "	4s,	Aug. 1, 1918	50,000 00	
Stoughton	Town "	4s,	June 1, 1920	2,000 00	
Reading	" "	4s,	June 1, 1922	5 000 00	
"	" "	4s,	June 1, 1923	5,000 00	
Medford	City "	4s,	July 1, 1923	2,000 00	
Old Colony R. R. Co.		4s,	Dec. 1, 1925	50,000 00	
Fitchburg R. R. Co.	"	4s,	Mar. 1, 1927	40,000 00	
					681,500 00
					$1,021,500 00
Cash in bank					73,755 09
					$1,095,255 09

The following are the investments belonging to the Water Loan Funds: —

Cambridge	City bonds	3 1-2s,	Matur'g	Nov.	1, 1912	$20,000 00	
"	" "	4s,	"	Feb.	1, 1913	2,000 00	
"	" "	4s,	"	Oct.	1, 1916	65,100 00	
"	" "	3 1-2s,	"	Dec.	1, 1917	40,000 00	
"	" "	3 1-2s,	"	Nov.	1, 1919	20,000 00	
"	" "	4s,	"	Nov.	1, 1920	5,000 00	
							$152,100 00
Lynn	" "	4s,	"	Jan.	1, 1905	19,000 00	
Wakefield	Town "	4s,	"	Oct.	1, 1905	5,000 00	
Brookline	" "	3 15-100	"	Apr.	1, 1906	20,000 00	
Providence, R. I.	City "	5s,	"	July	1, 1906	50,000 00	
Hull	Town "	3 1-2s,	"	Sept.	14, 1906	2,300 00	
Wakefield	" "	4s,	"	Oct.	1, 1906	6,000 00	
Malden	City "	4s,	"	Nov.	1, 1906	5,000 00	
Troy, N. Y.	" "	3 1-2s,	"	Nov.	15, 1906	2,000 00	
Wakefield	Town "	4s,	"	Oct.	1, 1907	6,000 00	
Malden	City "	4s,	"	Nov.	1, 1907	5,000 00	
Troy, N. Y.	" "	3 1-2s,	"	Nov.	15, 1907	2,000 00	
Hull	Town "	4s,	"	May	1, 1908	5,000 00	
Methuen	" "	4s,	"	Aug.	1, 1908	10,000 00	
Greenfield	" "	3 1-2s,	"	Oct.	15, 1908	6,000 00	
Malden	City "	4s,	"	Nov.	1, 1908	5,000 00	
Troy, N. Y.	" "	3 1-2s,	"	Nov.	15, 1908	2,000 00	
West Springfield	Town "	3 1-2s,	"	Dec.	1, 1908	12,000 00	
New Bedford	City "	3 1-2s,	"	Feb.	1, 1909	16,000 00	
Methuen	Town "	4s,	"	Aug.	1, 1909	15,000 00	
Greenfield	" "	3 1-2s,	"	Oct.	15, 1909	6,000 00	
Malden	City "	4s,	"	Nov.	1, 1909	5,000 00	
Troy, N. Y.	" "	3 1-2s,	"	Nov.	15, 1909	2,000 00	
Taunton	" "	3 1-2s,	"	June	1, 1910	21,000 00	
Somerville	" "	4s,	"	July	1, 1910	8,000 00	
Greenfield	Town "	3 1-2s,	"	Oct.	15, 1910	6,000 00	
Troy, N. Y.	City "	3 1-2s,	"	Nov.	15, 1910	2,000 00	
Taunton	" "	3 1-2s,	"	June	1, 1911	35,000 00	
Greenfield	Town "	3 1-2s,	"	Oct.	15, 1911	12,000 00	
Newton	City "	3 1-2s,	"	Nov.	1, 1911	12,500 00	
Troy, N. Y.	" "	3 1-2s,	"	Nov.	15, 1911	2,000 00	
New Bedford	" "	3 1-2s,	"	Mar.	1, 1912	15,000 00	
Pittsburg	" "	3 1-4s,	"	Apr.	1, 1912	10,000 00	
Worcester	" "	3 1-2s,	"	July	1, 1912	35,000 00	
Wakefield	Town "	4s,	"	Oct.	1, 1912	1,000 00	
Troy, N. Y.	City "	3 1-2s,	"	Nov.	15, 1912	2,000 00	
" "	" "	3 1-2s,	"	Nov.	15, 1913	2,000 00	
" "	" "	3 1-2s,	"	Nov.	15, 1914	2,000 00	
Lynn	" "	4s,	"	Jan.	1, 1915	16,000 00	
Weymouth	Town "	3 1-2s,	"	May	1, 1915	2,500 00	
Troy, N. Y.	City "	3 1-2s,	"	Nov.	15, 1915	2,000 00	
Weymouth	Town "	3 1-2s,	"	May	1, 1916	2,500 00	
Wellesley	" "	4s,	"	Mar.	1, 1917	2,000 00	
Waltham	City "	4s,	"	Apr.	1, 1917	24,000 00	
Weymouth	Town "	3 1-2s,	"	May	1, 1917	2,500 00	
Hallowell, Me.	City "	4s,	"	Jan.	1, 1918	15,000 00	
Wellesley	Town "	4s,	"	Mar.	1, 1918	1,000 00	
Weymouth	" "	3 1-2s,	"	May	1, 1918	2,500 00	
"	" "	3 1-2s,	"	May	1, 1919	2,500 00	
"	" "	3 1-2s,	"	May	1, 1920	2,500 00	
Penobscot Shore Line R. R. Co.		4s,	"	Aug.	1, 1920	25,000 00	
Fitchburg R. R. Co.		3 1-2s,	"	Oct.	1, 1920	50,000 00	
Quincy	City bonds	4s,	"	May	1, 1923	2,000 00	
"	" "	4s,	"	May	1, 1924	1,000 00	
"	" "	4s,	"	May	1, 1925	2,000 00	
"	" "	4s,	"	May	1, 1926	3,000 00	
"	" "	4s,	"	May	1, 1927	3,000 00	
Attleborough	Town "	4s,	"	July	1, 1927	10,000 00	
Amounts carried forward						$542,800 00	$152,100 00

Amounts brought forward							$542,800 00	$152,100 00
Quincy	City	"	4s,	"	May	1, 1928	3,000 00	
Winchester	Town	"	4s,	"	June	1, 1928	6,000 00	
Quincy	City	"	4s,	"	May	1, 1929	3,000 00	
Fall River	"	"	3 1-2s,	"	Nov.	1, 1929	75,000 00	
Quincy	"	"	4s,	"	May	1, 1930	3,000 00	
"	"	"	4s,	"	May	1, 1931	3,000 00	
"	"	"	4s,	"	May	1, 1932	1,000 00	
Newton	"	"	4s,	"	Aug.	1, 1935	2,000 00	
"	"	"	4s,	"	July	1, 1936	11,000 00	
Grafton	Town	"	3 1-2s,	"	July	1, 1937	1,000 00	
Old Colony R. R. Co.			4s,	"	Jan.	1, 1938	25,000 00	
Grafton	Town bonds		3 1-2s,	"	July	1, 1938	2,000 00	
"	"	"	3 1-2s,	"	July	1, 1939	2,000 00	
								679,800 00
								$831,900 00
Cash in bank								75,735 98
								$907,635 98

The bonded City Debt matures as follows, viz. : —

July 1, 1903, Sewer	6s	$136,000 00	
July 1, 1903, Street Widening . . .	6s	10,000 00	
Nov. 1, 1903, Building	4s	40,000 00	
July 1, 1904, Sewer	6s	295,000 00	
July 1, 1904, Street Widening . . .	6s	90,000 00	
Aug. 1, 1904, City	4s	52,000 00	
July 1, 1905, Sewer	6s	144,000 00	
July 1, 19 5, Street Widening . . .	6s	14,000 00	
Aug. 1, 1905, Cemetery	4s	65,000 00	
Nov. 1, 1907, Sewer	4s	30,000 00	
Nov. 1, 1907, Paving	3½s	20,000 00	
Nov. 1, 1907, Schoolhouse	3½s	9,500 00	
Nov. 1, 1907, Street	3½s	11,000 00	
Aug. 1, 1908, City	3½s	4,900 00	
July 1, 1909, City	3½s	45,000 00	
Nov. 1, 1909, Sewer	4s	22,000 00	
Nov. 1, 1909, City	3½s	32,000 00	
May 1, 1910, Sewer	4s	15,000 00	
Nov. 1, 1910, Cemetery	3½s	7,000 00	
Nov. 1, 1910, City	3½s	36,000 00	
July 1, 1911, Sewer	4s	15,000 00	
July 1, 1911, Clay Land	4s	50,000 00	
Nov 1, 1911, City	3½s	36,000 00	
July 1, 1912, City	3½s	38,000 00	
Nov. 1, 1912, Clay Land	3½s	20,000 00	
Nov. 1, 1912, City	3½s	20,000 00	
Aug. 1, 1913, Clay Land	3½s	10,000 00	
July 1, 1914, Clay Land	3½s	17,000 00	
Aug. 1, 1914, Building	4s	118,000 00	
Aug. 1, 1914, Street	4s	30,000 00	
Oct. 1, 1915, Building	4s	60,000 00	
Oct. 1, 1915, Street	4s	60,000 00	
July 1, 1916, Building	4s	70,000 00	
Oct. 1, 1916, Street	4s	137,000 00	
Oct. 1, 1916, Building	4s	33,000 00	
Oct 1, 1916, Sewer	4s	75,000 00	
Oct. 1, 1916, Schoolhouse	4s	6,000 00	
July 1, 1917, Schoolhouse	3½s	100,000 00	
Oct. 1, 1917, Harvard Bridge . . .	4s	10,000 00	
May 2, 1918, Schoolhouse	3½s	100,000 00	
Amount carried forward		$2,083,400 00	

Amount brought forward			$2,083,400 00
May 2, 1918, Street		3½s	15,000 00
June 1, 1918, Schoolhouse		3½s	50,000 00
July 1, 1918, Harvard Bridge		4s	100,000 00
Aug. 1, 1918, Schoolhouse		3½s	142,000 00
Sept. 1, 1918, Harvard Bridge		4s	100,000 00
Mar. 1, 1919, Harvard Bridge		4s	115,000 00
July 1, 1919, Schoolhouse		3½s	42,000 00
Nov. 1, 1919, Street		3½s	5,000 00
Nov. 1, 1919, Schoolhouse		3½s	13,000 00
Nov. 1, 1920, Harvard Bridge		4s	5,000 00
Nov. 1, 1920, Street		3½s	21,000 00
July 1, 1921, Harvard Bridge		4s	60,000 00
July 1, 1921, Street		3½s	30,000 00
July 1, 1921, Cambridge Bridge		3½s	24 000 00
July 1, 1921, Schoolhouse		3½s	76,000 00
Nov. 1, 1921, Public Library		3½s	27,000 00
July 1, 1922, Hospital		3½s	6,000 00
July 1, 1922, Schoolhouse		3½s	86,500 00
July 1, 1922, Street		3½s	30,000 00
Oct. 1, 1922, Schoolhouse		3½s	11,000 00
Nov. 1, 1922, Street		3½s	14,000 00
Aug. 1, 1923, Harvard Bridge		4s	10,000 00
Feb. 1, 1924, Park		4s	360,000 00
Aug. 1, 1924, Sewer		4s	75,000 00
Oct. 1, 1925, Sewer		4s	60,000 00
Aug. 1, 1926, Park		4s	100,000 00
Oct. 1, 1926, Park		4s	40,000 00
Nov. 1, 1929, Sewer		3½s	42,000 00
July 1, 1930, Sewer		3½s	100,000 00
Aug. 1, 1931, Sewer		3½s	110,000 00
Aug. 1, 1932, Metropolitan Park Assessment		3½s	46,000 00
Nov. 1, 1932, Sewer		3½s	20,000 00
Aug. 1, 1935, Park		4s	100,000 00
Feb. 1, 1936, Park		4s	100 000 00
Sept. 1, 1937, Park		3½s	100,000 00
Nov. 1, 1937, Charles River Improvement		3½s	50 000 00
June 1, 1938, Park		3½s	50,000 00
Aug. 1, 1938, Park		3½s	50,000 00
Aug. 1, 1938, Charles River Improvement		3½s	50,000 00
July 1, 1939, Cambridge Bridge		3½s	50,000 00
Aug. 1, 1939, Park		3½s	100,000 00
July 1, 1940, Cambridge Bridge		3½s	100 000 00
July 1, 1940, Park		3½s	50,000 00
Nov. 1, 1940, Park		3½s	50,000 00
Feb. 1, 1941, Cambridge Bridge		3s	100,000 00
Oct. 1, 1941, Park		3½s	100,000 00
Nov. 1, 1941, Cambridge Bridge		3½s	100,000 00
July 1, 1942, Park		3½s	48,000 00
Aug. 1, 1942, Cambridge Bridge		3½s	100,000 00
			$5,316,900 00

The Bonded Water Debt matures as follows:—

Nov. 1, 1906	3 1-2s	$43,000 00
Oct. 1, 1907	4s	90,000 00
Nov. 1, 1907	4s	22,000 00
July 1, 1908	4s	46,000 00
Aug. 1, 1908	4s	25,000 00
July 1, 1909	4s	20,000 00
Amount carried forward.		$246,000 00

Amount brought forward		$246,000 00	
May 2, 1910	4s	288,000 00	
July 1, 1910	4s	75,000 00	
Sept. 1, 1910	4s	125,000 00	
Jan. 1, 1911	4s	20,000 00	
Oct. 1, 1911	4s	35,000 00	
Jan. 1, 1912	4s	150,000 00	
May 1, 1912	4s	75,000 00	
Nov. 1, 1912	4s	45,000 00	
Feb. 1, 1913	4s	100,000 00	
Aug. 1, 1913	4s	50,000 00	
April 1, 1915	4s	200,000 00	
Aug. 1, 1915	4s	200,000 00	
April 1, 1916	4s	100,000 00	
July 1, 1916	4s	200,000 00	
Aug. 1, 1916	4s	100,000 00	
Oct. 1, 1916	4s	265,100 00	
April 1, 1917	3 1-2s	200,000 00	
July 1, 1917	3 1-2s	100,000 00	
Nov. 1, 1917	3 1-2s	75,000 00	
Dec. 1, 1917	3 1-2s	140,000 00	
May 2, 1918	3 1-2s	50,000 00	
June 1, 1918	3 1-2s	60,000 00	
Nov. 1, 1918	3 1-2s	50,000 00	
Nov. 1, 1919	3 1-2s	23,000 00	
Nov. 1, 1920	3 1-2s	30,000 00	
July 1, 1921	3 1-2s	30,000 00	
July 1, 1922	3 1-2s	13,500 00	
Nov. 1, 1922	3 1-2s	5,000 00	
April 1, 1924	4s	300,000 00	
			$3,350,600 00

To the Board of Commissioners of the Sinking Funds of the City of Cambridge: —

Your Committee appointed to examine the accounts of the Treasurer of the Funds reports that his books are carefully kept and his accounts are properly vouched. The cash and bond transactions of the Treasurer for the year have been carefully computed and figured by your Committee independently of his books, thereby proving the absolute accuracy of his accounts.

The transactions of the Treasurer and of the committee on investment during the year, and the present condition of the Funds is shown by the following statement.

MUNICIPAL FUND.

BOND ACCOUNT.

Amount of bonds in the Fund November 30, 1901	$966,500 00	
Amount of bonds purchased during the year	93,000 00	
		$1,059,500 00
Amount of bonds matured during the year	30,500 00	
Amount of bonds sold during the year	7,500 00	
		$38,000 00
Amount of bonds in the Fund November 30, 1902		$1,021,500 00

CASH ACCOUNT.

Cash on hand November 30, 1901		$75,352 36	
Cash received from City Treasurer derived from taxation		158,841 83	
Cash from interest on investments		42,852 95	
Cash for bonds sold	$ 7,500 00		
Cash for matured bonds	30,500 00		
		38,000 00	
Cash for premium on bond sold		9 00	
			$315,056 14
Cash paid for bonds purchased		$93,000 00	
Cash paid for premium on bonds purchased.		2,610 40	
Cash paid for accrued interest on bonds purchased		690 65	
Amount paid to City Treasurer to redeem City Debt falling due this year		145,000 00	
			$241.301 05
Cash on hand November 30, 1902			73,755 09
Total amount of Municipal Loan Sinking Fund, November 30, 1902			$1,095,255 09

WATER WORKS FUND.

BOND ACCOUNT.

Amount of bonds in the Fund, Nov. 30, 1901	$749,400 00	
Amount of bonds purchased during the year	82,500 00	
Amount of bonds at par value, in the Fund, November 30, 1902		$831,900 00

CASH ACCOUNT.

Cash on hand November 30, 1901	$8,331 54		
Cash received from water rates, fines, etc.	123,000 29		
Cash received for interest on investments	28,933 82		
		$160,265 65	
Cash paid for bonds purchased	$82,500 00		
Cash paid for premium on bonds purchased	1,423 50		
Cash paid for accrued interest on bonds purchased	606 17		
		$84,529 67	
Cash on hand November 30, 1902			75,735 98
Total amount of Water Works Sinking Fund, November 30, 1902			$907,635 98

FRANK A. ALLEN,
JOHN C. BULLARD,
} *Committee on Accounts.*

City Bonds amounting to $419,500.00 have been issued during this year. City Bonds to the amount of $145,000.00 matured this year and were paid from this Fund. The total amount of the City Debt proper

now outstanding is $5,316,900.00. Deducting the present assets of this Fund, $1,095,255.09, leaves the net amount of the Bonded City Debt, exclusive of the Water Works Debt, November 30, 1902, $4,221,644.91, which shows a net increase of the City Debt this year of $221,097.27. The property valuation of the City for 1902, real and personal, as found by the Assessors, is $98,139,885.00, an increase of $2,647,244.00 above valuation of 1901. There will be due to this Fund from taxation in 1903 the sum of $156,510.42. There will mature next year City Bonds amounting to $186,000.00, which will be paid from this Fund.

Bonds on account of the Cambridge Water Works to the amount of $18,500.00 have been issued during the current year. The total amount of the Bonded Water Debt now outstanding is $3,350,600.00. Deducting from this the present assets of this Sinking Fund $907,635.98, leaves the net amount of the Bonded Water Debt, November 30, 1902, $2,442,964.02 showing a decrease in the net amount of this debt during this year of $131,404.44. No Water Bonds matured this year and none will mature before 1906. There will be due to this Fund from water rates in 1903 the sum of $121,522.50.

FRANK A. ALLEN,
GEORGE H. HOWARD,
JOHN C. BULLARD,
ANDREW J. LOVELL,
J. HENRY RUSSELL,
DANA W. HYDE,

Commissioners of the Sinking Funds of the City of Cambridge.

REPORT OF THE COMMITTEE ON FINANCE, 1902

The Committee on Finance herewith submits its annual report, it being for the financial year ending November 30, 1902.

A condensed statement of the annual estimates as made at the beginning of the year is given below, viz:—

APPROPRIATIONS AND ESTIMATED REVENUE, 1901

City Department accounts	$148,000 00	
Water Department accounts	326,736 75	
Other Revenue	432,000 00	
Cash in Treasury, December 1, 1901	276,544 65	
		$1,183,281 40

AGGREGATE AMOUNT OF APPROPRIATIONS RECOMMENDED.

	Revenue.	Expenses.
City Department accounts	$148,000 00	$2,255,217 23
Water Department accounts	326,736 75	354,736 75
	$474,736 75	$2,609,953 98

GENERAL RECAPITULATION.

Total estimated expenses as before recited	$2,609,953 98	
Allowance for uncollected taxes as of Nov. 30, 1902	310,000 00	
Total appropriations and liabilities		$2,919 953 98
Estimated revenue of all kinds and cash in Treasury		$1,183,281 40
Leaving amount to be provided for		$1,736,672 58

To meet this requirement the Committee recommended as follows:—

1.—The issue of funded loans, viz:—		
Bridge loan	$24.000 00	
Hospital loan	6 500 00	
Park loan	50.000 00	
Schoolhouse loan	89,500 00	
Street loan	31.000 00	
Water loan	14,000 00	
		$215,000 00
2.—Assessment upon the polls and estates of the inhabitants of Cambridge, etc., for the current year, being the amount required for the municipal expenses for the year		$1,521,672 58
Total		$1,736,672 58

Agreeably to the estimates before stated, the Committee reported the following orders, viz: —

CITY OF CAMBRIDGE
IN COMMON COUNCIL, March 11, 1902.

Ordered: That the sum of *one million, five hundred and twenty-one thousand, six hundred and seventy-two dollars and fifty-eight cents* ($1,521,672.58) be raised by assessment upon the polls and estates of the inhabitants of the City of Cambridge, and the estates of non-resident proprietors, according to law, to defray the current expenses of the City for the financial year beginning December 1, 1901, and ending November 30, 1902.

CITY OF CAMBRIDGE
IN COMMON COUNCIL, March 11, 1902.

Ordered: That the following sums be and hereby are appropriated towards defraying the expenses of the City of Cambridge for the financial year beginning December 1, 1901, and ending November 30, 1902.

The amount of the appropriation, as before stated, was $2,609,953.98.

Following the latter order was a list of the several appropriations in detail, a copy of which was furnished to each member of the City Council, and to the newspapers of the City.

The final sheet of the City Auditor, as issued for the month of November, shows that the appropriations before stated were so changed by additions and transfers during the year as to aggregate as follows: —

City Department accounts	$2,297,474 76
Water Department accounts	362,408 29
Total appropriations	$2,659,883 05

Following the usual custom at the close of the year, a sub-committee was appointed to examine the condition of the City Treasury at the close of business on Saturday, November 29, that being the last day of the financial year of 1902. The Committee consisted of Alderman Carstein, Councilmen Rhoades and Lake.

This sub-committee attended to its duty and submitted the following report: —

CITY OF CAMBRIDGE, December 1, 1902.

To the Committee on Finance:—

GENTLEMEN:—The Sub-Committee appointed to count and examine the cash in the hands of the City Treasurer, at the close of business on November 29, 1902, would respectfully report:—

November 29, 1902. Actual cash and business checks in the City Treasurer's office amounted to . .		$8,544 47	
Also, a certificate from W. F. Earle, Cashier of First National Bank, of Cambridge, Mass., showing a balance (at close of business November 29, 1902), to the credit of the City Treasurer, of	$206,407 14		
From this balance should be deducted checks Nos 15551 and 15566, not presented to bank for payment, amounting to	86 35		
Making a net balance in above bank, of . . .		206,320 79	
Also, a certificate from F. B. Wheeler, Cashier of Lechmere National Bank, of Cambridge, Mass., showing a balance (at close of business November 29, 1902), to the credit of the City Treasurer, of .		17,254 96	
Also, a certificate from Louis W Cutting, Treasurer of the Cambridge Trust Company of Cambridge, Mass., showing a balance (at close of business November 29, 1902), to the credit of the City Treasurer, of .		50,268 09	
Making the total cash on hand			$282,388 31
December 22, 1902. After the above examination by your Committee, certain additional entries belonging to the financial year 1902 were made, the receipts and expenditures which these same represent being as follows:—			
RECEIPTS.			
Account of Cemetery Department (sundry collections received from Superintendent of Cambridge Cemetery)		$94 00	
Account of Overseers of the Poor Department:—			
City Home, sundries		6 28	
Farm, receipts from sales of farm produce	$397 02 75 10	472 12	
House offal, receipts from sales of offal . . .		25 85	
Account of City Clerk's Department—City Clerk's Fees		12 75	
From Commonwealth of Massachusetts:—			
Account of Health Department—Contagious disease cases		2,205 00	
Account of Public Property—City Buildings, armory rents		1,100 00	
Account of State Aid		14,555 64	
Account of Corporation Tax		78,321 59	
Account of National Bank Tax, being amount received for stocks of Massachusetts Banks outside of Cambridge owned by Cambridge residents .		17,270 01	
Account of Street Railway Tax (Chapter 578, Acts of 1898)		69,747 61	
Account of Overseers of Poor—City Home . .		19 68	
Account of Overseers of Poor—Outside Aid . .		111 41	
Account of Taxes, 1902, additional to entry of Nov. 29, 1902, but not previously reported		17,330 31	
Account of Street Watering, collections on 1902 taxes		143 48	
Account of Street Watering, contribution from Boston Elevated Railway Co.		901 70	
Account of Interest, collections on 1902 taxes . .		92 94	
Amount carried forward		$202,410 37	

Amount brought forward	$202,410 37	
Account of Treasury Department, summonses on 1902 taxes	89 20	
Account of Temporary Loan; receipts from sale of City Note, payable May 1, 1903, issued in anticipation of uncollected taxes of 1902	20,000 00	
A total of		222,499 57
Which amount, added to City Treasurer's cash balance of November 29, 1902, as above, makes a total of		$504,887 88

EXPENDITURES.

Authorized additional payments as of November 29, 1902, verified by your committee, are as follows :—		
Paid City Treasurer of Cambridge in trust for Cemetery Fund, on account of additional receipts for "Perpetual Care" of a lot in Cambridge Cemetery	$64 50	
Paid Commonwealth of Massachusetts : —		
Account of Armory Tax for year 1902 . . .	4,154 46	
Account of National Bank Tax, being refund of taxes on non-resident owners of stock in Cambridge banks	7,802 80	
Account of State Tax, assessment for year 1902 .	47,820 00	
Account of Metropolitan Parks Assessment Tax: Interest, Maintenance and Sinking Fund charges for the years 1900 and 1901	59,792 82	
Account of Metropolitan Parks Assessment Tax: Interest, Maintenance and Sinking Fund charges for the year 1902, and interest on deferred payments for 1900 and 1901	36,686 14	
Account of Metropolitan Sewer Tax, being annual assessment for the year 1902, for Interest, Maintenance and Sinking Fund charges on account of Metropolitan Sewer	78,252 17	
Account of Abatements — Taxes, Assessors' certificates received and allowed on sundry taxes of 1902, as per additional entry of November 29, 1902	224 35	
Account of Water Department — Sinking Fund. Amount paid Commissioners of Sinking Funds, being excess of receipts over expenditures of Maintenance Accounts of Water Works . .	2,171 54	
Account of Weekly Pay-Roll, No. 223	10,724 20	
A total of		247,692 98
Which, deducted from the foregoing total of receipts, shows a balance in City Treasurer's hands, as of November 29, 1902, of		$257,194 90
Your Committee would further state that we examined the total cash receipts and expenditures, as per City Treasurer's ledger, and find the same to be as follows : —		
Total cash receipts from all sources for the year ending November 30, 1902	$3,564,713 42	
To this should be added cash balance of November 30, 1901	340,147 87	
A total of		$3,904,861 29
Amount carried forward		$3,904,861 29

Amount brought forward	$3,904,861 29
Total cash expenditures for the year ending November 30, 1902, the same authorized by sundry drafts of the Mayor, which your Committee examined .	3,647,666 39
Which amount deducted from above total of receipts, shows a cash balance, as of November 29, 1902, verified by our above report, of	$257,194 90

The Sub-Committee were enabled to further verify the above statement of receipts and expenditures, by comparison with the City Auditor's statement of December, 1902.

Your Committee also examined the securities belonging to the several funds held in trust by the City Treasurer—namely, the Cemetery Fund, $58,234.68; Sarah E. Russell Fund, $814.41,—and find the same to be correct.

HANS L. CARSTEIN,
HERBERT A. RHOADES,
CHARLES H. LAKE,
Sub-Committee.

The foregoing report brings to a conclusion the work of the Committee on Finance for the year 1902. It is required by a rule of the Common Council that "Every order or resolution relating to a department of the City, shall upon presentation be referred to the Committee upon that department," and "Every order involving the expenditure of money shall, if reported favorably by the Committee aforesaid, be referred to the Finance Committee." As this rule has been suspended only upon rare and urgent occasions, frequent meetings have been required. All important matters referred to the Committee have been finally disposed of, and no order involving a large expenditure of money has been sent forward to the next year.

JAMES F. AYLWARD,
HANS L. CARSTEIN,
JOHN D. MERRILL,
JOHN W. COVENEY,
THORNDIKE SPALDING,
HERBERT A. RHOADES,
EDWARD E. CLARK,
DANIEL B. SHAUGHNESSY, Jr.,
CHARLES H. LAKE,
HOWLAND DUDLEY.
} *Committee on Finance.*

REPORT OF THE CITY MESSENGER

OFFICE OF THE CITY MESSENGER,
December 1, 1902.

To the Honorable, the City Council: —

GENTLEMEN: — In compliance with the provisions of Section 3, Chapter 8, of the "Revised Ordinances of 1892" the City Messenger has the honor to submit his annual report for the year ending November 30, 1902.

On the 15th of April, the most efficient, kind and ever courteous City Messenger, Francis L. Pratt, who for twenty-six consecutive years had received a unanimous re-election and was one of the best known and most popular men in the City, resigned to take up an abode with his son and family in the distant town of Pomona, California.

At a joint convention of the City Council held on April 29th his resignation was accepted and the following was unanimously adopted: —

Resolved: — "That we, the members of the City Council of Cambridge of the year 1902, for ourselves and in behalf of our predecessors of the last twenty-seven years, desire to pay our individual tributes of affection and gratitude to Francis Lowell Pratt, our former City Messenger, for the faithfulness with which during all these years he has conducted the affairs of his office; for the unfailing kindness he has ever shown to all with whom he has come in contact. It is our best wish in his behalf that the years before him may be many, that in them he may enjoy peace, happiness and prosperity, uninterrupted with an ever present consciousness that far away in his former home, there remains to him an uncounted host of constant hearts who will not forget the genial, loving and loyal Francis L. Pratt."

During the year Annual Documents have been received from the following cities and towns and are on file in the reference library: —

Arlington, 1901.
Belmont, 1901.
Beverly, 1901.
Brockton, 1901.
Brookline, 1902.
Burlington, Vt., 1901.
Boston, 1901-2.
Chicopee, 1901.
Chelsea, 1901.
Concord, N. H., 1901.
Everett, 1901.
Fitchburg, 1901.
Gloucester, 1901.
Haverhill, 1901.
Holyoke, 1901.
Lawrence, 1901.
Lowell, 1901.
Lynn, 1901.
Medford, 1902.
Melrose, 1901.
Montpelier, Vt., 1901.
Nashua, N. H., 1901.
New Bedford, 1901.
Newburyport, 1901.
Newton, 1901.
Newport, R. I., 1901.

North Adams, 1900.
Northampton, 1901.
Pittsfield, 1902.
Portland, Me , 1901.
Portsmouth, N H., 1901.
Providence, R I., 1901.
Quincy, 1901.
Richmond, Va., 1901.
Salem, 1901.
Somerville, 1901.
Springfield, 1902.
San Francisco, Cal., 1901.
Taunton, 1901.
Waltham, 1901.
Watertown, 1902.
Woburn, 1901.
Worcester, 1902.

After consultation with His Honor, the Mayor, some 142 volumes of Massachusetts Public Documents from 1858 to 1892 inclusive, were transferred to the Cambridge Public Library to replenish part of a somewhat worn out set.

With regard to the purchase and delivery of stationery I would submit the following: —

Stock of stationery on hand December 1, 1901	$338 45
Purchased during the year	1,192 09

Delivered to the heads of departments as follows: —

Assessors' Department	$103 35
Auditing Department	15 84
Board of Health	32 12
Board of Survey	4 00
City Clerk's Department	88 69
City Clerk's Department (Elections)	47 87
City Messenger s Department	88 46
Clerk of Committees Department	111 19
Electrical Department (Wires)	12 23
Electrical Department (Lamps)	4 23
Engineering Department	29 93
Executive Department	59 90
Fire Department	4 08
Inspector of Milk and Vinegar	1 26
Law Department	34 37
Park Department	53 06
Police Department	68 89
Public Library	30 00
Sealer of Weights and Measures	11 65
Sewer Department	11 74
State Aid Department	14 11
Street Department	72 43
Superintendent of Buildings	35 95
Registrars of Voters	25 10
Treasurer's Department	37 75
Water Department	7 00
Stock on hand December 1, 1902	527 34
	$1,530 54

Respectfully submitted,

FRANK T. EVANS,
City Messenger.

REPORT OF THE COMMITTEE ON SOLDIERS' AID

The Committee on Soldiers' Aid submits to the City Council its report for the year ending November 30, 1902: —

The amount paid as regular State Aid was	$13,282 00
The amount paid to indigent soldiers and sailors was	1,207 00
The amount paid as soldiers' relief was	7,352 00
The amount paid for the burial of deceased indigent or friendless soldiers or sailors was	840 00
The amount paid to the clerk and agent employed in the examination of settlements, etc., was	1,100 01
Printing and stationery	102 36
Aid by cities and towns	90 00
Carriage hire "Transporting patients"	7 00
Board and care of sundry persons	1,382 78
Car tickets	30 00
Fuel given for soldiers' relief	74 48
Sundries, principally groceries	19 61
Typewriting	6 00
Total	$25,493 24

The amount received from the Commonwealth was	$14,555 64
The amount received from other towns and cities was	332 98
The sundry authorized payments which were not paid	400 50
Total	$15,289 12

There are now upon the State Aid list 265 persons, and upon the list of indigent soldiers and sailors 7. The number of persons upon the soldiers' relief list is 105.

All of which is respectfully submitted,

HANS L. CARSTEIN,
HERMAN BIRD,
JAMES T. BARRETT,
FRED L. BEUNKE,
STOUGHTON BELL,
Committee on Soldiers' Aid.

REPORT OF THE TRUSTEES OF THE CAMBRIDGE PUBLIC LIBRARY

To the Honorable, the City Council: —

The trustees of the Cambridge Public Library respectfully submit this their forty-fifth annual report, covering the year ending November 30, 1902.

For the first time in five years there has been a change in the membership of the board of trustees. Judge Jabez Fox declined a reappointment, feeling unable to devote as much time to the duties of the position as he thought proper, and Judge Augustine J. Daly resigned for a similar reason. The former was succeeded by Dr. Eugene A. McCarthy, and the unexpired term of the latter was filled by Mr. John H. Hurley.

The year has been a somewhat trying one for the trustees. The annual appropriation for the library had not been increased for five consecutive years, which was virtually an annual diminution, as the necessary expenses of the institution had increased from year to year with the greater demands upon it due to the growth of the city and the improvements in equipment and administration required by the progress of library science. The trustees therefore felt obliged this year to ask for a considerably larger appropriation, but to their surprise and disappointment the amount given them, instead of being increased, was made a thousand dollars less than for the previous year. Believing that this action must be attributed to a misapprehension of the needs of the library, they asked permission to appear by committee before the board of aldermen in order to explain what those needs were. This was done, but the appeal for more money was ineffectual.

This decrease in the appropriation could not have been foreseen by the trustees, and it was not finally decided upon until several months of the new year had elapsed. Meanwhile the expenditures of the library has been going on at the former year's rate, and the retrenchment for the remainder of the year became an embarrassing problem for the trustees. After careful consideration how it could be solved without detriment to the most imperative interests of the library, they reluctantly decided to close the delivery stations, which, though a great convenience to many of its patrons, were not an absolute necessity. We hope that these stations may be re-established during the coming year.

The addition to the stack-room, which was arranged for last year, has been completed and will furnish a great relief to crowded shelves. It will not be entirely ready for use until the electric light installation is completed in January.

It is to be hoped that funds may be provided for the additional assistant in the children's room, recommended by the librarian in his report of last year, and again this year. Other excellent suggestions of the librarian, with much information concerning the work of the past year, will be found in his report printed herewith.

Much credit is due the librarian and his efficient corps of assistants that, notwithstanding the reduced income, the results of the year's work have been on the whole so satisfactory. Aside from the suspension of the local delivery, the chief loss has been in the amount available for the purchase of books. This is a serious impairment of the resources of the library and is the more to be deplored because it has been going on for several years, all other expenses having increased while the appropriation has been stationary.

The trustees may venture to remind the representatives of the people who are entrusted with the distribution of the public revenues that the library is an important part of our educational system. Its scope is broader and its clientage larger than those of the public schools. No institution supported by the money of the people is more democratic, in the best sense of the term. Its advantages are free to every man, woman, and child who can read. It is a supplementary department of every school, public or private, in the city, from the lowest grade to the highest,— a school for the teachers as well as the pupils. It is the high school for those who cannot continue their studies beyond the grammar school, and for those of mature age who had few opportunities for school training in their early years. It is the evening school, open every day, Sundays not excepted, for those who cannot attend the regular evening schools on account of their fixed hours and courses of study. It is the industrial school for the working man who has no other means of self-culture in his special craft. Its advantages are eminently for those who are least able to get them elsewhere,— who can buy few books and take few periodicals, but are here supplied with both in abundance; and the cost of it is paid almost entirely by those who are least dependent upon its resources.

Respectfully submitted,

WILLIAM TAGGARD PIPER,
WILLIAM J. ROLFE,
For the Trustees.

REPORT OF THE LIBRARIAN

CAMBRIDGE, MASS., November 26, 1902.

To the Trustees of the Cambridge Public Library: —

GENTLEMEN: — The event of chief significance in the history of the library for the year now closing is the completion of the addition to the stack. A regrettable delay in the installation of the electric lights has prevented the full utilization of the newly-acquired space, but despite this drawback most of the books have beeen arranged on the shelves which they are to occupy for a long time to come. In the basement are the general works, philosophy, and religion; on the main floor, English prose fiction, biography, science, and useful arts, although eventually it will probably be necessary to transfer the last-named division to the basement; on the second floor, history (including travels) and sociology; and on the topmost floor, literature, philology, and fine arts. Some volumes of American history which have been kept temporarily in the local history room have been removed to the stack, and this room now contains only the local history of New England and New York, together with the genealogies. The library as a whole is now more systematically and conveniently arranged than at any previous time in its history.

Certain repairs which I recommended in my report last year have not been made for lack of money. To the list of these repairs there should be added another item, which has already received your approval,— the re-wiring of the old part of the stack to conform to the system, for which a contract has already been made, in the new part. I have previously pointed out to you that the old electric lights are not only unsatisfactory but wasteful, as there are but two switches for this portion of the building.

The decreased appropriation made for the library in the budget of this year, after we had already lived several months on the basis of last year's expenditure, necessitated a reduction in our expenses and resulted in the closing of our local delivery stations. This meant that many people who live at remote distances from the library were obliged to give up its use altogether. I earnestly hope you may find it possible to re-establish the stations early in the coming year; but should this prove

to be impossible, I recommend that you consider the feasibility of delivering books by express once or twice a week to one or more of the localities where experience has shown that the greatest need of a delivery service exists.

As the delivery of books did not cease until the end of May, the schools were not materially affected until the beginning of the present term. An arrangement has recently been made for sending books to the schools by express once in two weeks, and the expense is borne by the school board. It should be a source of great gratification to us that the school work can go on, even though under somewhat less favorable conditions; for the total severance of relations between the schools and the library would be the greatest misfortune that could result from the abandonment of outside deliveries. We are fortunate in having among our nearest neighbors four large schools, the pupils of which make direct use of the library, and the volume of our school work is in consequence greater than the statistics of circulation show. But the teachers and pupils of all the schools have, or ought to have, a constant need of library books, and it is our duty to extend, so far as we can, to all the schools in the city the privileges enjoyed by those near at hand.

On account of the prevalence of small-pox in the city, the library was closed, by recommendation of the board of health, from June 20, at noon, until the morning of June 28. The fear of contagion undoubtedly lessened the circulation of books during the summer, but the results in this particular were less noticeable than the popular excitement might have led one to expect. During the week when the library was closed, preparations were made for a new registration of borrowers, which had been planned for the early fall, and the registration was begun as soon as the doors were re-opened. It has progressed with unusual lack of friction, and 6,442 cards have been issued to date. In addition, 168 cards were given out to pupils in the Harvard summer school.

Our music library has recently been somewhat enlarged, and we now have at least a satisfactory foundation for what is destined to be a useful and important department. Four sets of Underwood's stereoscopic views have been purchased, and the library now has seven in all. These photographs are in almost constant use in the children's room, and I am convinced that the pleasure and profit which they yield warrant a still further increase in their number. They may be loaned to the schools.

We have ordered during the year printed catalogue cards, issued by the Library of Congress, for most of the new, copyrighted books purchased and also for a limited number of old books for which cards were obtainable. As a rule, the printed cards are now promptly supplied, and they have proved to be highly satisfactory. The scope of these cards is

steadily being extended to include more and more of the books published before the plan was put into operation; and the libraries of the country not only gain the advantages which printed cards possess over those that are typewritten or written by hand, but effect a considerable saving as the result of the consolidation of so much cataloguing.

Work is progressing on a card catalogue for the East Cambridge branch, and a beginning has been made on a special catalogue of local history and genealogy, which is to be placed in the local history room.

The employment of an assistant who should give all her time to the children was recommended in my last report, but the income of the library has admitted of no increase in the staff. The importance of advice and suggestion to children in their use of the library is now so clearly recognized that special training in work of this nature forms one of the most useful features of the curriculum of the library school. I trust you will reserve the subject for future consideration.

We are trying the experiment, thus far with success, of holding regular meetings of the library staff for the interchange of views on the work of the different departments and for the discussion of suggestions for increasing the library's efficiency. There have been no changes in the regular staff during the year. I take this opportunity to thank my assistants for the interest they have shown in their work and for the faithfulness with which they have performed it.

Appended to this report you will find the usual statistics of circulation, expenditures, etc. Until the recent arrangement, already spoken of, was made, we have been able to send but few books to the schools since the beginning of the present term. The burning of the Allston school building, whereby we lost seventeen books, interrupted our regular deliveries to that school, and the number of books sent during the rest of the year was small. There has been no local circulation during the latter half of the year except through the deposit collections, some of which we are still able to keep up, although we have no regular carrier. The circulation of the main library and that of the East Cambridge branch are almost identical with the figures of last year. The loss in each case during the late spring and summer has been made up by a gain in the last quarter of the year.

Respectfully submitted,

WILLIAM L. R. GIFFORD,
Librarian.

APPENDIX I

GENERAL STATISTICS.

Total number of volumes in the library	62,101
Volumes added during 1902	3,247
Volumes condemned	1,608
Duplicates exchanged	165
Volumes destroyed on account of contagious diseases	47
Volumes lost	68
Volumes lost by Allston school fire	17
Volumes bound	2,462
Postal cards sent for books overdue	5,284

CIRCULATION.

	Central.	Local, including branch library.	Schools.	Total.
First Quarter	35,457	14,123	2,724	52,304
Second Quarter	36,652	12,624	2,557	51,833
Third Quarter	25 174	3,171*	.....	28,345
Fourth Quarter	32,144	4,399	754	37,297
Total	129,427	34,317*	6,035	169,779

* Regular local deliveries ceased May 31, 1902.

Average per day (Central library)	436
Largest issue (Central library), March 1	901
Largest issue (Local stations), Dec. 28	276
Largest issue (Schools), Dec. 6	373
Smallest issue (Central library), March 5	242
Teachers' books drawn directly from library	4,222

CLASSIFIED CIRCULATION (MAIN LIBRARY).

Classes.	General Works.	Philosophy.	Religion.	Sociology.	Philology.	Science.	Useful Arts.	Fine Arts.	Literature.	History.	Biography.	Fiction, including juvenile fiction.	Current Magazines.	Total.
Circulation	5,339	825	1,012	2,452	301	2,214	1,684	3,090	7,014	7,544	4,783	87,874	5,295	129,427
Per cent	.041	.007	.008	.019	.002	017	.013	.024	.054	.058	.037	.679	.041	

SCHOOL DELIVERY.

Name of School.	Allston.	Ellis.	Harvard.	Morse.	Peabody.	Putnam.	Roberts.	Russell.	Shepard.	Taylor.	Thorndike.	Washington.	Webster.	Wellington.	Total.
Books delivered .	174	466	264	179	491	1,088	680	716	196	196	768	200	70	547	6,035

LOCAL DELIVERY.*

Stations	Whalen.	Hunnewell.	Phillips.	Yerxa.	East Cambridge.	Gove.	Dow.	Prospect Union.	Deposit collections.	East Cambridge Branch.	Total.
Books delivered	696	4,883	455	444	540	1,751	1,751	1,021	4,320	18,452	34,317

* Regular local deliveries ceased May 31, 1902.

ADDITIONS (INCLUDING REPLACED BOOKS).

Source	City appropriation.	Citizens' subscription fund.	Cummings fund.	Fay fund.	Gifts.	By exchange.	Total.
Books.....	2,900	13	16	4	313	1	3,247

APPENDIX II

AMOUNTS RECEIVED BY THE LIBRARIAN AND DEPOSITED WITH THE CITY TREASURER.

	Fines.	Catalogues.	Duplicates.	Paper stock, etc.	Total.
December-February	$143 63	.....	$9 50	$4 48	$157 61
March-May	162 89	$8 30	.....	2 98	174 17
June-August.	116 26	2 85	.....	1 92	121 03
September-November	114 76	2 55	.....	3 05	120 36
Total	$537 54	$13 70	$9 50	$12 43	$573 17

CITY APPROPRIATION.

Salaries.

Appropriation	$9,550 00
Expended	9,544 01
Amount unexpended	$5 99

General Expenses.

Appropriation	$8,450 00

Expenditures.

Binding	$914 41	
Books and periodicals	4,459 58	
Bulletin	328 50	
Fuel	392 71	
Furniture	82 82	
Incidentals	311 59	
Insurance	378 00	
Lighting	809 04	
Local stations	217 50	
Printing, postage, and stationery	461 32	
Repairs	93 22	
		8,448 69
Amount unexpended		$1 31

SPECIAL APPROPRIATION FOR EAST CAMBRIDGE BRANCH LIBRARY.

Salaries.

Appropriation	$930 00
Expended	927 66
Amount unexpended	$2 34

General Expenses.

Appropriation	$420 00

Expenditures.

Binding	$20 88	
Books and periodicals	312 79	
Incidentals	22 00	
Lighting	63 50	
		419 17
Amount unexpended		$0 83

FUNDS OF THE TRUSTEES.

Citizens' Subscription Fund.

Balance, December 11, 1901	$162 30
Interest on bonds	220 00
Cash gifts, credited to this fund	19 20
	$401 50

EXPENDITURES.

T. H. Castor & Co.	$23 55	
Library Art Club	5 00	
Little, Brown & Co.	58 00	
Geo. E. Littlefield	20 25	
Geo. H. Lyman, Collector	5 00	
Society for Psychical Research	5 00	
Underwood & Underwood	100 46	
		$217 26
Balance on hand, December 15, 1902		$184 24

Cummings Fund.

Balance, December 11, 1901	$41 43
Interest on bond	80 00
	$121 43

EXPENDITURES.

American Architect and Building News Company	$9 00	
Little, Brown & Co.	36 00	
J. B. Millet Company	50 00	
New England Historical Publishing Company	18 00	
		$113 00
Balance on hand, December 15, 1902		$8 43

Fay Fund.

Balance, December 11, 1901		$24 12
Interest on bond		35 00
		$59 12

EXPENDITURES.

Burrows Brothers Company	$7 00	
T. T. Fryer	5 00	
Harvard Book Store	20 00	
Somerville Historical Society	1 00	
		$33 00
Balance on hand, December 15, 1902		$26 12

APPENDIX III

GIFTS.

	V.	P.
Abbot Public Library, Marblehead		1
Aberdeen (England) Public Library		1
Adriance Memorial Library, Poughkeepsie, N. Y.		1
Aguilar Free Library Society, New York, N. Y.		1
Alexander, Constance G.	5	
Allen, Charles H., Lowell		1
American Congregational Association, Boston		1
American-Irish Historical Society, Boston	1	
Ames, Mrs. James Barr	5	
Amherst College		1
Andover Theological Seminary		1
Angell, James Burrill, Ann Arbor, Michigan		1
Appalachian National Park Association		1
Atkinson, Edward, Brookline		2
Balch, Edwin S., Philadelphia, Pa.	1	
Barnard College, New York, N. Y.		1
Barrett, James T.	2	
Benton, Josiah H., jr., Boston	1	
Berry, John M., Millbury		1
Bigelow Free Public Library, Clinton		1
Birmingham (England) Free Libraries		1
Boston, City of	3	
Boston Book Co.	1	
Boston Public Library	1	2
Boston Transit Commission	1	
Bostonian Society		2
Bowdoin College, Brunswick, Maine		2
Brandon, Edward J., City Clerk, Cambridge	1	
Breeze Publishing Company, South Harpswell, Maine	1	
Brockton Public Library		1
Bronson Library Fund, Waterbury, Conn.		1
Brookline Public Library		2
Brooklyn (N. Y.) Public Library		1
Brooks, Francis A., Boston		1
Brown University, Providence, R. I.		2
Browne, T. B., Limited, London	1	
Bryn Mawr (Pa.) College		2
Bullard, Louisa D.		2
Bunker Hill Monument Association, Boston	1	
Bureau of American Republics, Washington, D. C.	1	
Burlington, (Vt.) Free Public Library		1
Burrill, Ellen M., Lynn	1	
Cambridge, City of	3	2
Cambridge: —		
Associated Charities		2
Avon Home		2
Cambridge Hospital		2
Christ Church Parish		1
Church Library Association		1
Episcopal Theological School		1
Mount Auburn Cemetery		1
Social Union	2	1
Young Men's Christian Association	1	
Young Women's Christian Association	1	

	V.	P.
Carnegie Library, Atlanta, Ga.		1
Carnegie Library, Pittsburgh, Pa.		2
Chicago (Ill.) Libraries		1
Chicago (Ill.) Public Library		8
Cincinnati (Ohio) Library Society for the Blind		1
Cincinnati (Ohio) Public Library		5
Citizens' Committee of National Capital Celebration, 1900	1	
Civil Service Reform Association, Woman's Auxiliary, New York, N. Y.		4
Clark University, Collegiate Department, Worcester		1
Cleveland (Ohio) Public Library		1
Cogswell, Edward R.	1	
Colorado College and Cutler Academy, Colorado Springs, Col.		1
Columbia University, New York, N. Y.		2
Concord (N. H.) Public Library		1
Connecticut Bureau of Labor Statistics, Hartford	1	
Cornell University, Ithaca, N. Y.		1
Cumston Charles Greene, Boston		3
Dana, Elizabeth E.		1
Dartmouth College, Hanover, N. H.		3
Davis, Andrew McFarland	1	1
Dayton (Ohio) Public Library and Museum		1
De Normandie, James, Boston	1	
Des Moines (Iowa) Public Library		1
Dougherty, Harold P., Washington, D. C.	1	
Dover (N. H.) Public Library		1
Drexel Institute, Philadelphia, Pa.		1
Eau Claire (Wis.) Public Library		2
Enoch Pratt Free Library, Baltimore, Md.		1
Everett, Mrs Edward F.	1	
Fisher, Sydney G., Philadelphia, Pa.		1
Fitchburg, City of	1	
Fitchburg Public Library		1
Fitz Public Library, Chelsea		1
Fletcher Free Library, Burlington, Vt.		1
Fobes, Edwin F.	1	
Forbes Library, Northampton		1
Foster, Francis Apthorp	4	
Framingham State Normal School		1
General Theological Library, Boston		1
Gifford, Franklin Kent, Somerville	1	
Gifford, William L. R.	1	2
Girard College, Philadelphia, Pa.		1
Gloversville (N. Y.) Free Library		1
Green, James, Worcester		1
Green, Samuel Abbott, Boston	Mss., Posters	2
Hamblen, Deborah, Yarmouthport	1	
Hanus, Paul H.		1
Hartford (Conn.) Public Library		1
Harvard University Library	3	1
Haverford (Pa.) College		1
Haverhill Public Library		1
Hervey, Eliphalet Williams, New Bedford	1	
Higginson, Thomas Wentworth	8	
Hills, William S.	1	
Hoar, George F., Washington, D. C.	1	
Holy Cross College, Worcester		2
Huling, Ray Greene		1
Hyde, James H., New York, N. Y.	1	
Hyde Park Public Library		1
Iles, George, New York, N. Y.		1
Indian Rights Association, Philadelphia, Pa.		5
Iowa, Historical Department of, Des Moines	1	

	V.	P.
Jay, William	1	
John Crerar Library, Chicago, Ill.		2
Johns Hopkins University, Baltimore, Md.		1
Knopf, S. A., New York, N. Y.		1
Lake Mohonk (N. Y.) Conference on International Arbitration		1
Lancaster Town Library		1
Lauer, S.	1	
Lawrence Free Public Library		1
Lawson, Thomas W., Boston	1	
Leffingwell, Albert, Brooklyn, N. Y.	1	
Leicester Public Library		1
Leland Stanford Jr. University, Palo Alto, Cal.		1
Love, James, Camden, N. J.	1	
Lowell Textile School		1
Lynn Public Library		1
McCall, Samuel W., Washington, D. C.	1	1
McClure, Phillips & Co., New York, N. Y.	1	
Magoun, Francis P. and George B., New York, N. Y.	Bust	
Malden Public Library		1
Manchester (N. H.) City Library		1
Massachusetts, Commonwealth of	62	1
Massachusetts Association of Women Workers, Boston		1
Massachusetts Civil Service Commission		1
Massachusetts College of Pharmacy, Boston		1
Massachusetts Institute of Technology, Boston		1
Massachusetts Society of Sons of the American Revolution	1	
Massachusetts State Board of Charity	1	
Massachusetts Total Abstinence Society		1
Mayor, John E. B.		1
Medford Public Library		1
Merriam, William R., Washington, D. C.	10	
Metropolitan Park Commissioners, Boston	3	
Middlesex County		1
Milton Public Library		1
Milwaukee (Wis.) Public Library		1
Minneapolis (Minn.) Public Library		3
Morris, Robert C., Cheyenne, Wy.		1
Mount Holyoke College, South Hadley		1
Murray, Thomas Hamilton, Boston		1
Museum of Comparative Zoölogy		1
Museum of Fine Arts, Boston		27
Nash, Nathaniel Cushing	3	
National Civil Service Reform League		1
Nautical Preparatory School, Boston		1
New Bedford Free Public Library		1
New Bedford Park Commissioners	1	
New Haven (Conn.) Free Public Library		2
New York (City). Board of Education		1
——— Public Library	1	
New York State Library, Albany, N. Y.	3	5
Newark (N. J.) Free Public Library		1
Newton Free Library		1
Noble, John, Boston	1	
North Adams Public Library		1
North Carolina College of Agriculture and Mechanic Arts, West Raleigh		1
North Packing and Provision Co., Boston		1
Northampton Public Library		1
Northfield Seminary, East Northfield		1
Oberlin (Ohio) College Library		1
Ohio State University, Columbus, Ohio		1
Paine, Robert Treat, Boston	1	
Parlin Memorial Library, Everett		1

	V.	P.
Peabody Museum of American Archæology and Ethnology	1	
Peoria (Ill.) Public Library		1
Philadelphia (Pa.) Free Library		1
Philippine Civil Service Board, Manila, P. I.		1
Piper, William Taggard	1	
Portland (Maine) Public Library		1
Princeton (N. J.) University		1
Providence (R. I.) Athenæum		1
Providence (R. I.) Public Library		1
Public Reservations, Trustees of, Boston	1	2
Redwood Library and Athenæum, Newport, R. I.		1
Reynolds Library, Rochester, N. Y.		1
Rindge, Frederick H., Los Angeles, Cal.	1	
Robbins Library, Arlington		1
Rockford (Ill.) Public Library		1
Russell, Etta Lois	2 photographs	15
St. Louis (Mo.) Mercantile Library Association		1
St. Louis (Mo.) Public Free Library		4
Salem Public Library		1
Scranton (Pa.) Public Library		1
Shute Memorial Library, Everett		1
Simmons College, Boston		1
Sleeper, John F.		2
Smith, Winifred B.	1	
Smith College, Northampton		3
Smithsonian Institution, Washington, D. C.	8	
Smyth, G. H., New York, N. Y.	1	
Soldiers' Home in Massachusetts, Chelsea		1
Somerville Public Library		1
Sound Currency Committee, Reform Club, New York, N. Y.	4	
Southbridge Public Library		1
Sprague, Homer B., East Orange, N. J.		3
Springfield City Library Association		2
Storrow, James J., Boston		2
Sweven, Godfrey	1	
Syracuse (N. Y.) Public Library		1
Tabor Academy, Marion		1
Thomas Crane Public Library, Quincy		1
Torrey, Henry Warren, Library of	4	
Trinity College, Hartford, Conn.		1
Tufts College, Medford		2
Tufts Library, Weymouth		2
Union League Club, Chicago, Ill.		1
United States: —		
Agriculture, Department of		24
Civil Service Commission	3	
Education, Bureau of	2	
Ethnology, Bureau of	2	
Industrial Commission	18	
Interstate Commerce Commission	1	
Labor, Department of	3	
Library of Congress	3	
Life-saving Service	1	
Patent Office	4	
Superintendent of Documents	1	
War Department	8	2
United States Military Academy, West Point, N. Y.		1
United States Naval Academy, Annapolis, Md.		2
University Club, New York, N. Y.	1	
University of California, Berkeley		1
University of Chicago		1
University of Colorado, Boulder		2

	V.	P.
University of Illinois, Urbana		5
University of Michigan, Ann Arbor		2
University of Pennsylvania, Philadelphia	1	1
University of Vermont, Burlington		1
University of Wisconsin, Madison		1
Vassar College, Poughkeepsie, N. Y.		1
Watertown Free Public Library		1
Webber, A. Carter	2	
Wells College, Aurora, N. Y.		1
Wellesley College		1
Wesleyan University, Middletown, Conn.		1
Westborough Public Library		1
Western Reserve University, Cleveland, Ohio		2
Weston, Louis F.		1
Wheeler, Edward W.		1
Whitney, Frank W., Watertown		1
Whorf, Edward Henry	59	
Williams, Rufus P.		5
Williams, Mrs. Rufus P		1
Williams College, Williamstown		2
Wilmington (Del.) Institute		1
Winthrop Public Library		1
Wisconsin Free Library Commission, Madison, Wis.		7
Wisconsin State Historical Society, Madison, Wis.	1	1
Woburn Public Library		1
Woman's College, Baltimore, Md.		2
Woodman, Cyrus, Estate of	20	
Worcester Academy		1
Worcester Polytechnic Institute		2
Yale University Library, New Haven, Conn.	1	2
Yarmouth Library Association		1

Bulletins, or similar publications, have been received from the following libraries: —

Boston Public Library
Brockton Public Library
Brookline Public Library
Brooklyn (N. Y.) Public Library
Cincinnati (Ohio) Public Library
Dover (N. H.) Public Library
Fitchburg Public Library
Hartford (Conn.) Public Library
Haverhill Public Library
Helena (Montana) Public Library
Iowa Library Commission, Des Moines, Iowa
Iowa Masonic Library, Cedar Rapids, Iowa
Lawrence Public Library
Library Association of Portland, Ore.
Lowell City Library
Lynn Public Library
Madison (Wis.) Free Library
Malden Public Library
Manchester (N. H.) City Library
Medford Public Library
Milton Public Library
New Bedford Free Public Library
New Haven (Conn.) Free Public Library
New York Public Library

Osterhout Free Library, Wilkes-Barré, Pa.
Paterson (N. J.) Free Public Library
Peabody Institute Library, Danvers
Philadelphia (Pa.) Free Library
Pratt Institute Free Library, Brooklyn, N. Y.
Providence (R. I.) Libraries
Salem Public Library
San Francisco (Cal.) Free Public Library
Silas Bronson Library, Waterbury, Conn.
Somerville Public Library
Springfield City Library
Wisconsin Free Library Commission, Madison, Wis.
Worcester Free Public Library.

REPORT OF THE CHIEF OF POLICE

To His Honor, the Mayor, and the City Council of the City of Cambridge : —

Gentlemen, — In compliance with the City Ordinance, I have the honor to present my annual report of the work of the Police Department for the year ending November 30, 1902.

The whole number of arrests for the year has been three thousand one hundred fifty (3,150) against three thousand two hundred sixty-seven (3,267) last year; a decrease of one hundred and seventeen (117).

Males	2,890	Adults	2,383
Females	260	Minors	767

The offences for which arrests have been made are as follows : —

Adultery	17	Illegal sale of liquor	4
Assault and battery	174	Illegal exposure of liquor	1
Assault, felonious	5	Keeping liquor with intent to sell	1
Assault on officer	8	Keeping open shop on Lord's day	1
Assault, indecent	4	Keeping unlicensed dog	4
Assault, with intent to rob	1	Keeping gaming nuisance	1
Attempt to break and enter	1	Liquor nuisance	7
Bastardy	21	Larceny	249
Begging	2	Larceny from building	4
Being present where gaming implements were found	12	Larceny from person	1
Breaking and entering	74	Loitering	5
Common nuisance	1	Malicious mischief	31
Capias	43	Manslaughter	3
Common drunkard	17	Murder	2
Contempt of Court	2	Non-support	75
Conveying leased property	1	Neglected children	29
Cruelty to animals	5	Obstructing street car	1
Default	3	Present at game on Lord's day	23
Deserter	1	Peddling without license	8
Disturbing public peace	266	Playing cards on Lord's day	5
Disorderly house	3	Profanity	1
Drunkenness	1,551	Refusing to be vaccinated	16
Disturbance on street car	22	Receiving stolen goods	8
Doing business on Lord's day	1	Runaways	2
Escaped prisoners	5	Robbery	1
Evading car-fare	3	Rape	3
Exposure of person	3	Refusing to assist an officer	3
Employing women illegally	2	Refusing to send child to school	1
Fast driving	4	Safe keeping	4
False liquor certificate	1	Stubborn children	14
Forgery	3	Stealing a ride	1
Fornication	8	Suspicious persons	16
Gaming, or present at	13	Selling cigars to minor	1
Gaming on Lord's day	3	Selling adulterated butter	1
Idle and disorderly	15	Threatening	4
Insane	16	Truants	4
Illegal transportation	1	Trespass	20
		Using milk jars unlawfully	1

Using illegal measure	3	Violating milk law	6
Unnatural act	2	Violating terms of probation	9
Vagrants	12	Violating park rules	4
Violating city ordinances	144	Violating building law	1
Violating liquor law	2	Walking on railroad track	97

Whole number of lodgers, 301.

Males	300	Minors	5
Females	1	White	290
Adults	296	Colored	11

NATIVITY OF PRISONERS.

United States	1,859	Wales	1
Ireland	723	Russia	36
British Provinces	266	France	4
England	74	Poland	8
Sweden	48	Arabia	1
Scotland	38	Austria	3
Germany	24	West Indies	10
Italy	19	Egypt	3
Mexico	1	Greece	1
New Zealand	2	Turkey	2
Portugal	10	Norway	9
Denmark	5	China	3

OCCUPATION OF PRISONERS.

Artists	2	Electricians	3
Action makers	7	Expressmen	4
Agents	23	Farmers	15
Bell boys	3	Florists	5
Brickmakers	13	Firemen	9
Blacksmiths	25	Gardeners	24
Butchers	19	Grocers	10
Brass finishers	9	Glass cutters	1
Bakers	38	Glass blowers	6
Bottlers	3	Housekeepers	164
Boilermakers	7	Hostlers	18
Bookkeepers	4	Hatters	1
Bookbinders	7	Harnessmakers	5
Barbers	19	Helpers	14
Bartenders	6	Instructors	2
Coachmen	14	Janitors	9
Cabinetmakers	9	Jewellers	1
Carpenters	61	Junk dealers	10
Coopers	8	Linemen	1
Conductors	4	Lathers	5
Clerks	61	Lawyers	1
Confectioners	8	Laborers	946
Curriers	6	Marble cutters	2
Cigarmakers	5	Messengers	2
Cooks	7	Masons	35
Contractors	5	Machinists	55
Druggists	6	Milkmen	18
Dentists	1	Moulders	41
Domestics	51	Nurses	3
Engineers	17	No occupation	539
Dressmakers	2	Printers	42

Paperhangers	8	Stone cutters	16
Plasterers	9	Sailors	11
Peddlers	66	Shippers	5
Packers	3	Shoemakers	37
Plumbers	22	Steamfitters	15
Polishers	20	Students	11
Painters	84	Storekeepers	8
Preachers	3	Teamsters	240
Photographers	1	Turners	2
Porters	8	Tailors	20
Roofers	8	Tinsmiths	14
Railroad men	9	Upholsterers	6
Ropemakers	1	Waiters	24
Rubber workers	41	Watchmen	7
Reporters	1	Weavers	5
Salesmen	13	Wire workers	1

MISCELLANEOUS BUSINESS.

Accidents	90	Defective wires	94
Buildings found open and secured	290	Defective streets and sidewalks	1,360
Cases investigated	1,453	Disturbances suppressed	75
Dangerous buildings	9	Dogs killed	20
Dead bodies found	14	Fire alarms given	15
Defective cesspools	36	Fires extinguished without alarm	13
Defective gas pipes	14	Lost children restored	256
Defective water pipes	86	Sick and injured persons assisted	56
Defective hydrants	11	Stray teams put up	38
Defective lamps	4,785	Water running to waste	29

Amount of property reported stolen	$7,596 30
Amount of property recovered	6,980 00

CITY PROPERTY IN USE BY POLICE DEPARTMENT.

210	badges	$150 00	
120	belts	137 50	
10	books	26 00	
4	bookcases	32 00	
8	bedsteads	40 00	
	Bedding and blankets	40 00	
1	buggy	150 00	
8	clocks	25 00	
2	bureaus	3 00	
70	chairs	87 50	
1	carpet	10 00	
	Letter press and stand	10 00	
200	copies police rules	40 00	
11	desks	125 00	
1	easy chair, matron's	10 00	
5	horses	500 00	
6	harnesses	120 00	
4	halters	1 00	
1	hat rack	50	
6	ink stands	3 00	
25	lanterns	18 75	
1	lounge	5 00	
8	mirrors	14 00	
3	maps	15 00	
10	rugs	20 00	
9	pairs of handcuffs	27 00	
3	signal systems	12,000 00	
Amount carried forward,		$13,610 25	
Amount brought forward,		$13,610 25	
3	patrol wagons	1,000 00	
120	revolvers	400 00	
	Ropes and stakes	5 00	
3	robes, carriage	10 00	
1	rognes gallery	150 00	
3	saddles and bridles	12 00	
2	safes	200 00	
120	short billies	50 00	
8	spittoons	2 00	
1	sleigh	25 00	
1	stove	8 00	
2	straps and weights	1 00	
1	telephone line	300 00	
3	thermometers	1 50	
6	tables	9 00	
40	tin dippers	4 00	
20	towels	9 00	
1	typewriter and desk	140 00	
2	umbrella stands	2 00	
1	wagon van, old	25 00	
8	waste baskets	1 00	
4	water coolers	30 00	
2	wardrobes	15 00	
	Operating table and chair	37 50	
3	medicine cabinets	75 00	
Total		$16,122 25	

EXPENDITURES.

Boarding horses	$300 00
Buttons for department	60 00
Boston Elevated Railway Company	300 00
Cambridge Gas Light Company	496 70
Cambridge Electric Light Company	121 67
Cleaning stations	234 30
Cloth for department	566 01
Clipping horses	7 50
Directories for department	18 00
Diaries for department	100 08
Expressing	6 25
Fresh Pond Ice Company	34 62
Feeding prisoners	47 44
Gas Consumers' Association	36 00
Hay and grain	700 32
Heating and care of buildings	890 00
Horse hire	2 00
Medicines	3 90
Medical attendance	6 00
New England Telephone and Telegraph Company	452 36
Photographs for department	38 00
Procuring evidence	25 00
Printing	228 04
Policemen, services of	116,236 19
Repairs on wagons	176 95
Repairs on harnesses	15 40
Repairs on revolvers	9 58
Repairs on buildings	69 44
Repairs on furniture	24 00
Revolvers for department, new	100 00
Refund on minors' licenses	37 05
Salary of Chief of Police	2,000 00
Salary of Deputy Chief of Police	1,500 00
Salary of Captains and Inspector	5,600 00
Shoeing horses	147 00
Supplies for stations	544 73
Travelling expenses	24 40
Typewriter, new	92 50
	$131,251 70
Appropriation	$131,251 70
Expenditures	131,251 70
Expenditures	$131,251 70
Receipts	4,757 16
Balance showing actual cost	$126,494 54

THE FORCE.

The organization of the force is the same as last year, consisting of a chief, deputy chief, one chief inspector with the rank of captain, one assistant inspector with the rank of lieutenant, three captains, six sergeants, eighty-seven patrolmen, ten reserve patrolmen, four drivers of patrol wagons, two drivers of ambulance, two matrons and one patrolman on the pension list.

The roster of the department is as follows: —

Chief, LOTHROP J. CLOYES.

Deputy Chief, WILLIAM F. BATCHELDER.

Chief Inspector.

Capt. James E. Murray.

Assistant Inspector.

Lieut. Henry C. Jones.

Captains.

Mark J. Folsom. John F. Murray. Fred B. Pullen.

Sergeants.

William Mullett.
Daniel Callahan.
James S. Alexander.
Charles L. Pike.
David A. Stevens.
Michael J. Conry.

Patrolmen.

Charles F Aberle
William H. Aberle
Frederick Apel
Richard H. Aylward
George T. Barrington
Edward F. Belcher
Elbridge S. Blen
Michael J. Brennan
Thomas M. Campbell
Daniel F. Counihan
James A. Cox
Timothy Corcoran
John Coulter
Edward J. Comerford
John W. Deehan
Patrick Doyle
Patrick F. Dunlea
Thomas F. Dynan
Anton B. Diehl
Frederick M. Ellis
James B. Forristall
Joseph H. Furbush
Michael A. Ginty
Herbert Gordon
William H. Graves
John J. Griffiths
Mortimer M. Hackett
James P. Hall
John A. Hezlitt
Benjamin F. Higgins
William H. Hill
Robert T. Hixon
James H. H. Holt
William H. H. Howe
Patrick J. Hurley
Edward F. Horrigan
Dexter Jewett
John Kelleher
James M. Keaney
Frederick L. Ladd
Frederick W. Law
Timothy F. Leahy
Dennis F. Leahy
George J. Mahoney
John P. Maloy
Charles C. Marston
John J. McBride
Jeremiah McCarthy
Charles J. McCann
Bernard McCaffrey
Edward J. McCabe
Joseph F. McCorry
John E McCrehan
James L. McElroy
William F McKeown
William H. McMenimem
James E. McNulty
Patrick F. Murray
Robert E. Mullen
Simon J. Mulvaney
William N. Mullins
Richard R. McFadden
Michael Neilan
John P. Neilan
Joseph W. Parks
Charles W. Priest
Charles H. Presho
Thomas J. Real
Ralph R. Rice
Fred A. Robinson
William H. Robertson
Bernard J Roper
Thomas P. Rowe
William H. Rowe
John W Roberts
Frank W Scobey
Benj. C. Scully
John E. Shaughnessy

John W. Skelley
George Smyth
Cornelius Sullivan
Joseph C. Temple
David H. Walsh
John H. Wells
David L. Walsh
Edward J. Welch
Orrin B. White
John E. Winslow
Charles W. Wyman

Reserve Patrolmen.

Harry W. Davis
Charles E Bradley
Frank D. LaMarche
Ernest E. Blanchard
Michael J. Kelley
Thomas F. Coady
Jeremiah P. McCarthy
Thomas Shea

John J. Canney

Drivers.

John T. Cook
John McCauley
John Sullivan
John Coffey
Warren H. Dow
George E. Sherman

Matrons.

Ellen S. Haines
Augusta M. Stearns

Pensioner.

Benjamin McKeen.

Twenty-seven patrolmen are on duty in the day time, one in the Public Library, one in the City Hall, one as clerk at Police Headquarters, one in Police Station 4, and twenty-three for street duty.

During the night time the deputy chief, six sergeants, and sixty-eight patrolmen are on duty, one as house officer in Police Station 4, two in wagon houses, and sixty-five for street duty.

CHANGES.

During the year two patrolmen have died, three reserve officers appointed, and four reserve officers made regular officers.

NO-LICENSE.

A continued effort has been made against the illegal sale of intoxicating liquor, search warrants have been served and convictions secured where it was possible to get sufficient evidence. There are very few, if any, places where liquor is sold illegally.

SIGNAL SYSTEMS.

In the three signal districts during the past year there have been : —

Duty calls by officers	381,742
Telephone calls	16,984
Wagon calls	1,543
Miles run	2,759
To fires	18
Sick and injured persons carried to hospital	18
Sick and injured persons carried home	4
Other runs	185

AMBULANCE.

The ambulance has been called to two hundred and thirty-two (232) accidents, and thirty-eight (38) removals.

MATRONS.

There were two hundred and sixty (260) females arrested during the year, an increase of thirty-seven (37) over last year. All have received the care and attention of the matrons.

UNIFORM CLOTH FOR THE DEPARTMENT.

There has been purchased cloth for the department during the year to the amount of $566.01. The money for the sale of the same to members of the department has been paid to the City Treasurer.

CONCLUSION.

In concluding this report I desire to extend to His Honor, the Mayor, the City Council, and all others who have assisted me in the performance of the duties of my office, my sincere thanks.

LOTHROP J. CLOYES,
Chief of Police

REPORT OF THE TRUSTEES OF THE BRIDGE CHARITABLE FUND

To the Honorable City Council : —

The twenty-sixth annual report of the Trustees of the Bridge Charitable Fund is herewith submitted.

The amount on deposit in the Cambridgeport Savings Bank to the credit of this Fund on July 18, 1901, was	$4,068 36
Interest added semi-annually to July 18, 1902, ...	143 62
Amount of the fund to the last named date	$4,211 98

In the annual City documents of the last twenty-five years, may be found a full report of the history of the establishment of this Fund. The donor, Levi Bridge, was a former citizen of Cambridge, and for some years was in business in East Cambridge. His health failing he gave up active business and for many years led a quiet life. A short time previous to his death he placed in the custody of Hon. John Sargent, a former Mayor of the City, the sum of $773.95 to be held in trust until the decease of Mr. Bridge.

The latter died in the year 1876, and on the twenty-fourth of January 1877, the money then amounting to $891.83, was formally turned over to the City by Hon. John Sargent as its custodian. The City was required under the terms of the trust "To add the interest of said Fund to the principal until such times as said Fund by the accruing of interest or by gifts from other philanthropic persons shall amount to two thousand dollars, after which time, one-third part of the interest of said Fund shall be added to the principal annually forever, and the remaining two-thirds of such interest shall be paid over annually to the Overseers of the Poor, for the time being, to be by them expended for the deserving poor of the City of Cambridge in such manner as they shall deem best."

The sum of $891.83 was added to the Fund in October, 1877, by Samuel J. Bridge, a kinsman of the original donor, and since that date, the Fund has increased by interest accumulation to its present amount viz. : — $4,211.98. From this amount the sum in excess of $2,000.00 will be deducted —$2,211.98. Of the latter sum, two-thirds, or $1,474.65, will be used "for the deserving poor" of our City. The remaining portion, or the accretion or $737.33, will be added to the Fund, which will then

amount, as at the close of the financial year of 1902 to the sum of $2,737.33. As stated in the report for the year 1901, the sum of $275.17 was withdrawn from this Fund in the year 1880 by Mayor William E. Russell. This sum was deposited by him in the Cambridgeport Savings Bank, where it has since remained. The amount has since increased by semi-annual interest additions to the sum of $536.41. There should therefore be used for the charitable purposes of the donor these two amounts viz. : —

The two-thirds of interest accretions, first stated	$1,474 65
The amount heretofore on deposit by Hon. Wm. E. Russell, Mayor .	536 06
Total	$2,011 06

So far as lies in the power of the present Board of Trustees, immediate steps will be taken for the purpose of the distribution of this amount.

JOHN H. H. McNAMEE,
JAMES F. ALYWARD,
THORNDIKE SPALDING,
} *Trustees of Bridge Charitable Fund.*

REPORT OF THE TRUSTEES OF THE DOWSE INSTITUTE

CAMBRIDGE, December 1, 1902.

To the Honorable, the City Council: —

The Board of Trustees of the Dowse Institute respectfully reports that a course of seven free lectures was given in Union Hall beginning January 7 and ending February 18, 1902.

An attested copy of the accounts of the Treasurer is herewith submitted showing the amount of receipts and expenditures.

FRANK A. ALLEN,
W. A. BULLARD,
GEO. HOWLAND COX,
} *Board of Trustees.*

W. A. BULLARD, TREASURER, IN ACCOUNT WITH DOWSE INSTITUTE.

Dr.		*Cr.*	
1902.		1902.	
To Balance	$43 50	By J. H. Ford, printing	$12 50
City of Cambridge, interest on fund one year	600 00	Robarts Harper, lecture	50 00
		H. L. Broadbridge, lecture	45 00
		Edwin H. Forbes, lecture	50 00
		Charles M. Fuller, lecture	35 00
		Frank M. Chapman, lecture	60 00
		J. C. Bowker, lecture	50 00
		W. Hinton White, lecture	50 00
		Cambridge Chronicle, advertising	10 00
		Cambridge Tribune, advertising	10 00
		Press Newspaper Co., advertising	10 00
		Est., D. A. Buckley, advertising	10 00
		Fred Magee, stereopticon	11 75
		Ushers and doorkeepers	28 00
		Printing poster	1 00
		Union Hall, rent	200 00
		Balance	10 25
	$643 50		$643 50

ATTEST: W. A. BULLARD,
Treasurer.

Audited:
GEO. HOWLAND COX.

REPORT OF INSPECTOR OF MILK

OFFICE OF INSPECTOR OF MILK AND VINEGAR,
CAMBRIDGE, December, 1902.

To His Honor, the Mayor, and the City Council of the City of Cambridge:—

GENTLEMEN:—I have the honor to present the report of the Department of Milk Inspection for the year ending November 30, 1902.

In the last year, 3,711 samples of milk have been analized by the department, and of these 3,365 were taken by the collector from dealers in milk. Of the 3,365 seized samples, 1,086 or 32.3 per cent. were below the standard. A comparison of the work of the department for the year with other years given in Table I shows this percentage to be by far the largest in any one year, but it must not be inferred that the milk of Cambridge is worse than it has ever been before as just the opposite is believed to be the case. The large increase is almost wholly due to the more complete and thorough examination of every sample.

TABLE I.

Year.	1898	1899	1900	1901	1902
Milkmen licenses	191	173	156	155	145
Store licenses	149	129	142	234	144
Milk samples collected	4,552	4,225	3,367	3,697	3,711
Below standard	458	367	313	481	1,086
Per cent. below standard	10.0	8.7	9.3	13	32.3
Warnings on milk	268	217	172	233	283
Vinegar samples	103	172	168	209	48
Below standard	15	19	15	83	24
Warnings on vinegar	9	12	5	38	22
Complaints	7	13	6	2	5
Convictions	7	10	5	2	4
Fines	.....	$510	$170	$70	$155
Number of stores December 1	.....	.....	359	472	486

The averages for the whole year of 12.85 for total solids and 3.76 for fat with a variation in monthly averages of 12.64 and 3.70 in September to 13.16 and 3.98 in February confirm the opinion expressed last year that the present law was unjust in requiring 13 per cent. solids in the winter months and too lax in calling for only 12 per cent. solids in the summer.

The law would be much more equitable if it read 12.50 per cent. of solids and 3.5 per cent. fat for the whole year.

The methods of analysis have remained unchanged during the year, and as they may be found given in full in the last annual report of this department they will not be repeated here. The results of the analysis by months are given in the following table: —

TABLE II.

RESULTS OF ANALYTICAL WORK ON MILK.

Months. December 1, 1901, to December 1, 1902.	Number of samples.	Samples below standard, in fat or solids.	Per cent. below standard, in fat or solids.	Total Solids.			Fat.			Solids not fat average.	Warnings sent.
				Highest.	Lowest.	Average.	Highest.	Lowest.	Average.		
December	205	103	50.2	18.26	9.44	12.95	8.10	2.10	3.93	9.02	25
January	297	155	52.2	17.54	11.10	13.04	9.70	2.40	3.94	9.10	38
February	252	132	52.4	21.24	10.24	13.16	12.50	1.90	3.98	9.18	31
March	380	254	66.8	19.54	9.90	12.85	10.40	1.80	3.83	9.02	37
April	318	20	6.3	15.16	10.66	12.73	6.30	2.10	3.68	9.05	18
May	345	14	3.9	16.32	10.70	12.78	7.50	2.40	3.68	9.10	13
June	313	16	5.1	14.74	11.52	12.75	5.80	2.70	3.68	9.07	14
July	208	15	7.2	16.36	11.08	12.71	7.10	1.80	3.66	9.05	15
August	254	15	5.9	19.86	10.44	12.70	11.40	2.60	3.76	8.94	14
September	255	37	14.5	20.02	10.06	12.64	11.10	2.00	3.70	8.94	35
October	285	184	64.5	23.74	11.54	12.90	15.00	2.20	3.77	9.13	24
November	253	141	55.7	17.14	11.04	12.98	8.40	1.60	3.80	9.18	19
Whole Year	3,365	1,086	32.3	23.74	9.44	12.85	15.00	1.60	3.76	9.09	283

The work of the year has shown an almost entire absence of skimmed, colored and preserved samples. Six cases have been brought into court, and of these one was without conviction. Two were producers, two were milkmen and one was a store. One other case was referred to the State Board of Health and resulted in a conviction at Concord. Of the cases one was brought for the use of formaldehyd and five for watering or for milk below the standard. One case was appealed but the defendants plead guilty in the Superior Court and paid their fine.

Besides the routine work in cows' milk some 130 samples of human milk have been analized and of these 117 were made with the purpose of a systematic investigation into the variation in composition of human milk. The work has been done in conjunction with Dr. Eugene A. Darling, the City Bacteriologist, who has had charge of the collection of samples and the clinical observations.

Collection of samples. The samples were collected under as uniform conditions as possible. After the child had suckled in the morning nurs-

ing for a few minutes, a sample of about one ounce was drawn by the breast pump. For a large part of the analysis the analytical work was begun within a few hours of the taking of the sample, but some few samples were preserved until next day with a drop of formalin.

Methods. The total solids were obtained by evaporation to dryness on a water bath. Usually two grams were taken.

Fat. The Babcock method was used for the determination of fat. In case the full 17.5 c.c. were not available 10 c.c. were taken and the results calculated to the normal.

Solids not Fat. The solids not fat were obtained by taking the difference between the total solids and the fat.

Proteids. A slight modification of Ritthausen's method was used in the determination of the proteids. Five c.c. of milk were diluted to 100 c.c. and 2 c.c. of copper solution (3 gms. copper sulphate to one litre) were added. A 6 per cent. caustic soda solution was next added until the solution was barely acid to phenol phthalein. After the precipitate had subsided the solution was filtered through balanced filters and the precipitate collected and washed on the filter. After drying at 150 degrees C. the filter was extracted with 76 degrees naptha until free from fat and given a final washing with ether to free from naptha. The precipitate was dried again and weighed. The weight minus the weight of the ash of the precipitate gives the proteids.

Ash. The ash was determined by igniting the total solids until white over a Bunsen burner.

Sugar. For the great majority of the samples the sugar was determined by difference. In a few samples as a check it was determined in the filtrate of the proteids by Fehlings solution.

INTERPRETATION OF RESULTS.

The individual analyses show a wide variation in each and every constituent, but most markedly in the fat. That varies from 0.70 per cent. to 7.04 per cent. and even in the samples from the same patient shows great differences. At the same time the solids not fat remain fairly constant. Such a variation in composition can hardly hold for the average of all the milk supplied at a nursing and must to a considerable extent be due to differences in taking the sample. Such variations are well known in milch cows.

TABLE III.

Case.	Age.	No. of Lactation.	No. of Samples.	Total Solids.	Fat.	Solids not Fat.	Sugar.	Proteids.	Ash.
A.....	42	13th	19	12.94	4.27	8.66	7.08	1.45	0.13
B.....	26	1st	16	10.73	2.12	8.61	7.15	1.32	0.14
C.....	38	7th	16	12.62	3.94	8.68	6.82	1.71	0.15
D.....	26	1st	9	10.26	1.88	8.39	7.02	1.22	0.15
E.....	37	2d	11	11.55	3.41	8.14	6.78	1.24	0.12
F.....	29	1st	20	9.74	1.31	8.43	7.13	1.18	0.12
G.....	29	1st	8	10.28	2.01	8.27	6.92	1.21	0.13
H.....	23	2d	18	12.03	3.64	8.39	7.00	1.27	0.12
Average.	.....	.....	117	11.39	2.91	8.48	7.01	1.34	0.13

A comparison of cases A and F show how little can be deduced from the results from one woman. Case A shows almost four times the amount of fat and almost 3 per cent. more proteids, while the sugar is .05 per cent. less. It is only by averaging a large number of samples from many different women that the individual differences in samples and women may be eliminated.

Tables showing the averages for each week from the beginning of lactation still show the effect of the individual sample to a marked degree, but a table calculated for periods of four weeks proves more satisfactory.

TABLE IV.

VARIATION IN AVERAGE COMPOSITION AT FOUR WEEKLY PERIODS.

Weeks of lactation.....	1–4	5–8	9–12	13–16	17–20	21–24	25–28	29–32	33–36
Number of samples.....	7	12	13	13	15	17	19	12	9
Total solids.....	11.59	11.14	11.27	11.42	11.51	10.86	11.36	11.91	11.84
Solids not fat.....	8.95	8.52	8.53	8.35	8.51	8.29	8.39	8.54	8.60
Sugar	7.22	6.98	7.05	6.83	7.06	6.97	6.96	7.00	7.13
Fat.....	2.63	2.62	2.73	3.07	3.01	2.56	2.97	3.37	3.24
Proteids.....	1.58	1.42	1.35	1.38	1.36	1.21	1.29	1.31	1.34
Ash	.16	.14	.14	.14	.14	.12	.12	.14	.12

No period is here represented by fewer than seven samples and the number may run as high as nineteen. The nearer approach of the averages to each other is very marked, and it is hard to escape the conclusion that a still larger number of samples would bring the individual averages still closer to the general average of all the samples. Certain small variations are, however, so marked that they cannot be due to case variations. Thus the proteids are seen to decrease very materially after the first period.

TABLE V.

VARIATION IN COMPOSITION BY NUMBER OF LACTATION.

FIRST LACTATION.

	Age.	No. of Lactation.	No. of Samples.	Total Solids.	Fat.	Solids Not Fat.	Sugar.	Proteids.	Ash.
B.....	26	1st	16	10.73	2.12	8.61	7.15	1.32	0.14
D.....	26	1st	9	10.26	1.88	8.39	7.02	1.22	0.15
F.....	29	1st	20	9.74	1.31	8.43	7.13	1.18	0.12
G.....	29	1st	8	10.28	2.01	8.28	6.92	1.21	0.13
Average.....	.....	.....	53	10.21	1.76	8.45	7.09	1.23	0.13

MORE THAN ONE LACTATION.

	Age.	No. of Lactation.	No. of Samples.	Total Solids.	Fat.	Solids Not Fat.	Sugar.	Proteids.	Ash.
E.....	37	2d	11	11.55	3.41	8.14	6.78	1.24	0.12
H.....	23	2d	18	12.03	3.64	8.39	7.00	1.27	0.12
C.....	38	7th	16	12.62	3.94	8.68	6.82	1.71	0.15
A.....	42	13th	19	12.94	4.27	8.66	7.08	1.45	0.13
Average.....	.....	.....	64	12.37	3.87	8.50	6.94	1.43	0.13

The results are also shown divided into two groups representing the first lactation and subsequent lactations. The variations between the two groups are quite marked. The fat in the first group averages 1.76 per cent. while in the other it is 3.87 per cent., or more than double. From the individual averages it is seen that the highest fat occurs in case A, the thirteenth lactation, the next in case C, the seventh lactation, while the other two members of this group, E and H, are both higher than the highest of the first group. The proteids do not fall in line so well, but the highest averages are again in the seventh and thirteenth lactations. The general average of the proteids is .20 per cent. more and of the sugar .15 per cent. less in the second group than in the first. These changes are in accordance with the variations which occur in the milk of a single individual, *i.e.*, a high fat percentage, is usually with a high proteid and a low sugar.

CONCLUSION.

1. The average composition of human milk as shown by 117 analysis is

Fat	2.91
Sugar	7.01
Proteids	1.34
Ash	0.13
Total solids	11.39
Solids not fat	8.48

2. There are wide variations from this average in milk from the same individual at different times.

3. There are marked variations in the average composition of milk from different individuals.

4. The average composition of human milk does not vary to any marked extent at different periods of lactation.

5. During the first lactation the milk on the average is weaker in fats and proteids, but stronger in sugar than in subsequent lactations. These differences may or may not be due to age.

It is to be hoped at some future time to extend these results, but enough has been done to show that many of the current formulas for the modification of cows' milk to simulate human milk are based on a wrong assumption concerning human milk.

VINEGAR.

Forty-eight samples of vinegar have been analyzed and just half of these are proved to be wholly or in part made from other than pure apple juice.

The results of the analysis are given in Table VI.

The methods of analysis were described in the last annual report of this department.

TABLE VI.

VINEGAR — RESULTS OF ANALYTICAL WORK.

No.	Acidity.	Total Solids.	Ash.	Alkalinity of Ash.	Polari-scope Reading.	Plumbic Acetate Reaction.
1	4.74	2.62	.205	18.5	-3.3	Small Precipitate.
2	4.50	2.54	.205	19.5	-2.0	Precipitate.
3	4.50	2.12	.226	22.0	-1.7	"
4	3.84	1.22	.127	.....	.....	Slight Precipitate.
5	5.56	1.05	.038	.....	.....	No Precipitate.
6	5.16	2.94	.330	38.0	.....	Precipitate.
7	4.98	2.62	.286	32.0	.....	"
8	4.62	2.80	.167	20.0	.....	"
9	4.60	2.02	.343	39.0	.....	"
10	4.62	2.20	.190	23.0	.....	"
11	4.62	2.84	.163	18.5	.....	"
12	4.64	2.34	.171	18.5	.....	"
13	4.86	2.58	.379	41.7	-2.5	"
14	4.84	2.52	.351	39.0	-2.6	"
15	5.02	2.54	.311	35.2	-2.2	"
16	4.94	2.96	.309	35.0	-2.9	"
17	4.90	2.50	.172	23.3	-2.4	"
18	4.38	3.36	.204	22.1	-3.4	"
19	4.84	2.04	.247	27.2	-1.7	"
20	4.86	2.88	.301	28.9	-0.5	"
21	5.00	2.56	.281	31.1	-0.7	"
22	4.56	2.50	.184	35.6	-2.2	"
23	4.72	2.88	.369	34.2	-1.1	"
24	4.70	3.50	.309	40.2	+0.7	"
25	4.78	2.40	.307	22.0	-2.3	"
26	4.86	3.36	.343	35.7	-0.8	"
27	4.84	1.94	.293	31.6	+0.8	"
28	5.14	2.48	.192	21.8	-2.8	"
29	4.68	2.32	.157	18.6	-2.5	"
30	4.82	2.64	.302	38.5	-3.0	"
31	4.70	2.54	.367	43.6	-1.7	"
32	4.40	.58	.029	.77	+0.6	No Precipitate.
33	4.84	2.16	.290	34.0	-1.4	Precipitate.
34	4.50	3.24	.413	47.2	-1.0	"
35	4.68	2.64	.204	20.0	-2.7	"
36	4.48	2.24	.336	32.5	-1.0	"
37	4.70	2.40	.327	37.5	-1.8	"
38	4.50	2.02	.293	33.0	+0.9	"
39	4.48	2.10	.193	21.8	-1.8	"
40	4.48	2.16	.273	32.0	+0.3	"
41	4.86	.30	.048	1.5	-0.0	No Precipitate.
42	4.56	2.10	.296	38.6	+1.3	Precipitate.
43	5.08	2.52	.281	30.5	-2.8	"
44	5.72	2.84	.193	20.0	-3.9	"
45	4.76	3.02	.236	26.6	-3.2	"
46	4.88	3.42	.319	36.5	-1.4	"
47	4.64	2.66	.359	43.0	-3.2	"
48	4.54	3.16	.372	43.0	-1.3	"
49	.....	11.17	.312	33.5	-12.4	"

Samples 14, 15, 16 are typical samples of pure vinegar while 24, 27, 38, 42, show a vinegar with the solids brought up with commercial apple jelly. Samples 32, 41 contain no cider vinegar, while 11, 12 and 29 are examples of mixed vinegars. No. 49 is a sample of sweet cider of known purity.

BUTTER.

The stores show a very general compliance with the new law in regard to renovated butter and no samples have been analyzed which were

not marked in conformity with the statutes. A complete analysis has been made of fourteen samples.

The methods of analysis are now as follows: —

The water is determined by drying at 110 degrees C.

Process, renovated butter and oleomargarine are distinguished by the pan and Waterhouse tests as given in Farmer's Bulletin No. 131 of the United States Department of Agriculture and oleomargarine is further tested for by a Zeiss oleofractometer. Where the sample is still in doubt the sample has been subjected to the Reichert process.

DISEASES IN MILK.

During the months of February and March the prevalence of typhoid fever in the City took on an epidemic form. Cases as first reported seemed to show little in common in regard to their milk supply, but on plotting each case on a map of the City the cases were seen to cluster in five groups, and in the centre of each group was a store. All of these stores were supplied with milk by the same milk dealer who, however, supplied but two of the cases directly with milk. An inquiry into the health of the milkman, his family and his help resulted in finding all concerned in excellent condition. An effort was made to trace the contagion back further, but as the milk dealer received his milk through a contractor from the middle part of the State and the contagion must necessarily have taken place two or three weeks before the inquiry took place, nothing definite was learned.

The foot and mouth disease has affected the milk supply of the City but little. No cases of the disease have been reported within the City limits, and the State has taken such effective control of the disease that chances of infected milk reaching the City from outside are very small.

The following statistics are from the records of the department: —

The results are expressed in cans of of 8 1-2 quarts and in gallons per diem.

	Cans	Gallons
Total milk consumed	4,320	9,180
Milk sold at retail by milkman	2,104	4,471
Milk sold from stores	2,183.5	4,640
Milk raised and used by private individuals	32.5	69
Skim milk	83.25	177
Cream	463 quarts	116
The milk is from the following sources:		
Brought by railroad	2,900	6,162
Brought by carts	1,246	2,648
Milk raised in the City	174	370

EXPENDITURES.

Appropriation		$1,680 00
Salary of Inspector	$900 00	
Salary of J. F. Wheeler	443 31	
Printing	65 41	
Apparatus	205 46	
Chemicals	23 03	
Car tickets	25 00	
Stationery	1 26	
Express	5 53	
Samples and incidentals	5 28	
	$1,674 28	
Balance of appropriation	5 72	
		$1,680 00

Respectfully submitted,

PHILIP P. SHARPLES,
Inspector of Milk.

REPORT OF THE SEALER OF WEIGHTS AND MEASURES

OFFICE OF THE SEALER OF WEIGHTS AND MEASURES,
BRATTLE SQUARE, CAMBRIDGE, December 1, 1902.

To the Honorable, the City Council: —

I herewith submit a report for the Department of Weights and Measures for the year ending November 30, 1902: —

Amount of original appropriation	$2,500 00	
Subsequent appropriation to meet expense of repairing Scale at Lechmere Square	275 00	
Total appropriation		$2,775 00

REVENUE.

Fees for Sealing	$673 76	
Fees for adjusting	188 95	
Attendance at Court	16 40	
Miscellaneous receipts	2 48	
Balance of weighing fees at City Scales	50 44	
Total revenue		$932 03

EXPENDITURES.

Salaries of Sealers: —			
A. S. K. Clark	$1.000 00		
John C. Connors	750 00		
Assistants: —			
J. C. Connors	15 00		
W. A. Forbes	4 50		
A. H. Edgerly	5 85		
E. E. Coye	3 50		
E. A. Counihan, Jr.	8 40		
		$1,787 25	
Horse: —			
Board	$216 00		
Shoeing	11 75		
		$227 75	
Wagons, etc., Repairs: —			
F. Ivers	$16 90		
T. McMahon	25		
Worcester Bros.	2 25		
T. H. Kneeland	6 50		
J. E. Fitzgerald	35 00		
		$60 90	
Amounts carried forward		$60 90	$2,015 00

Amounts brought forward		$60 90	$2,015 00
Harness: —			
J. Curry	$45 00		
Pung: —			
F P. Merrill	23 00		
		68 00	
			128 90
Office Incidentals: —			
Allen Bros.,		$13 95	
Boston Elevated Railway Co.		15 00	
Brock & Eaton		7 30	
Caustic & Claflin		31 50	
A. H Edgerly		2 00	
Chas. H. Thurston		1 30	
Cambridge Chronicle		12 00	
Cambridge Press		10 80	
J. Leo MacDonald		2 70	
S. M. Spencer & Sons		11 90	
Amee Bros.		4 99	
Chadwick Lead Works		1 30	
Clark & Mills		1 45	
Lufkin Rule Co.		10 00	
Wm H. O'Leary		7 53	
Geo. S. Saunders & Co.		50	
Sawin's Express		15	
E. F. Hunt & Co.		3 00	
Brock Bros.		77	
Billings & Stover		50	
Library Bureau		1 13	
American Express Co		15	
Cambridge Gas Light Co.		1 00	
N. E. Tel. & Tel Co.		9 60	
City Messenger Dept.		11 65	
Fairbanks Scale Co.		5 80	
A. S. K. Clark, Sundries		4 60	
E. T. Bynner		35	
			172 92
Marking Acid: —			
Garfield & Sawyer		$1 00	
Arthur Hudson		2 00	
Malden Chemical Co.		25 90	
			28 90
Repairs of City Scales: —			
Fairbanks Scale Co.		$140 65	
O. B. French		44 16	
Thos. F. Tracy		160 00	
Geo W. Gale Lumber Co		72 44	
F. Wolcott		3 25	
C. H Leach		6 00	
			426 50
Total expenditures			$2,772 22
Total appropriation		$2,775 00	
Amount unexpended		2 78	
Amount expended		$2,772 22	
Revenue		932 03	
Net expense of department			$1,840 19

INSPECTIONS AT OFFICE FOR YEAR ENDING NOVEMBER 30, 1902.

S — Sealed. A — Adjusted. C — Condemned.

	Scales.			Weights.			Dry Measures.			Liquid Measures.			Yard Measures.		Baskets		Milk Measures.	
	S	A	C	S	A	C	S	A	C	S	A	C	S	C	S	C	S	C
1901.																		
Dec.....	24	8	1	15	12	....	8	....	....	2	....	....	1	...	23	....	1,948	215
1902.																		
Jan.. ...	14	4	2	14	12	....	17	....	....	531	30	6	....	....	25	....	6,566	343
Feb.....	37	18	1	63	58	...	54	2	....	214	28	17	....	....	13	....	10,968	824
Mar.....	21	3	15	17	15	....	7	....	....	385	86	5	....	....	27	....	12,930	770
Apr.....	29	2	1	14	11	....	27	1	....	14	....	1	....	....	5	....	8,807	540
May.....	16	2	1	17	15	....	17	....	....	242	50	4	....	....	...	....	7,374	1,026
June.....	9	1	6	6	4	...	8	1	1	8	....	....	...	...	2	....	3,014	208
July. ...	4	....	1	1	1	....	10	....	...	.....	....	....	...	....	11	....	4,418	353
Aug.....	1	....	...	...	....	....	6	....	....	2	....	....	....	....	2	....	5,643	221
Sept.....	7	....	....	8	6	....	5	....	....	13	....	....	....	....	4	....	2,604	103
Oct.... ..	4	1	....	9	9	....	19	....	....	4	....	....	....	....	2	....	7,035	317
Nov.....	7	....	1	5	....	....	8	....	....	36	....	....	....	....	5	1	7,147	508
	173	39	25	169	143	....	186	4	1	1,451	194	33	1	....	119	1	78,454	5,428

Total number of articles inspected at Office, 86,041.

INSPECTIONS OUTSIDE OF OFFICE FOR YEAR ENDING NOVEMBER 30, 1902.

S — Sealed. A — Adjusted. C — Condemned.

	Scales.			Weights.			Dry Measures.			Liquid Measures.			Yard Measures.		Baskets	
	S	A	C	S	A	C	S	A	C	S	A	C	S	C	S	C
1901.																
Dec.....	12	3	1	106	82	....	31	....	....	30	....	....	.....	....	....	....
1902.																
Jan.....	.....	.....	....	.....	.....	....	.....	....	....	.....	....	....	.....	....	....	....
Feb.....	2	1	....	.....	.....	....	.....	....	....	.....	....	....	.....	....	....	....
Mar.....	5	1	....	6	6	....	.....	....	....	.....	....	....	.....	....	....	....
April.....	87	41	3	301	259	1	124	...	4	97	3	12	1	....	....	....
May.....	218	91	12	666	566	....	249	2	6	258	3	20	26	3	....	....
June.....	170	62	8	626	502	....	213	4	12	220	1	24	14	1	....	....
July.....	167	64	11	604	439	....	221	3	8	276	7	24	8	....	....	...
Aug...	198	71	12	682	439	1	217	1	1	256	3	3	19	....	....	....
Sept.....	383	76	17	1,291	625	1	474	2	4	544	6	20	24	....	....	....
Oct.....	357	59	15	1,128	660	....	227	....	8	248	1	21	68	5	....	....
Nov.....	194	15	4	844	414	....	47	....	2	14	1	4	....	....	....	....
	1,793	484	83	6,254	3,992	3	1,803	12	45	1,943	25	128	160	9	....	....

Total number of articles inspected Outside of Office, 12,221.

RECORD FOR YEAR ENDING NOVEMBER 30, 1902.

	Sealed.	Adjusted.	Condemned.	Total Inspected.	Per Cent. Sealed.	Per Cent. Adjusted.	Per Cent. Condemned.	Number Correct.	Number Incorrect.	Per Cent. Correct.	Per Cent. Incorrect.
Scales	1,966	523	108	2,074	94.8	25.	5.2	1,443	631	69.6	30.4
Weights	6,423	4,135	3	6,426	99.9	64.3	.05	2,288	4,138	35.6	64.4
Dry measures	1,989	16	46	2,035	97.7	.3	2.3	1,973	62	97.	3.
Liquid measures	81,848	219	5,589	87,437	93.6	.3	6.4	81,629	5,808	93.4	6.6
Yard measures	161	.....	9	170	94.7	.....	5.3	161	9	94.7	5.3
Baskets	119	.....	1	120	99.2	.....	.8	119	1	99.2	.8
	92,506	4,893	5,756	98,262	94.1	4.9	5.9	87,613	10,649	89.2	10.8

Total number articles inspected, 98,262.

WEIGHTS AND MEASURES DEPARTMENT — INVENTORY OF PROPERTY

1 Roll top desk, oak
1 Black walnut roll top desk, used by Superintendent of Janitors
1 Black walnut desk
5 Chairs
1 Black walnut table
1 Clothes press
1 Wooden cabinet
3 Benches
1 Sink
5 Mats
Miscellaneous books
1 Card records in oak case
1 Card index in oak case
1 Hektograph
1 Letter press
1 Blotter Bath

$150 00

1 Bay horse	$100 00	*Amount brought forward*	$809 75
1 Express wagon	100 00	1 Set Troy weights	3 00
1 Light wagon	75 00	1 Set Metric weights	3 00
1 Pung	23 00	1 Set Kilo weights	1 50
2 Harnesses	70 00	5 Boxes of miscellaneous weights, not standardized	10 00
1 Plush robe	1 00	1 Set iron weights, 25 lbs., 10 lbs., 5 lbs.	5 00
1 Stable blanket	2 00	40 50-lb. weights	100 00
1 Rain blanket	2 00	3 Glass graduates	1 00
1 Woolen blanket	1 00	1 Brass yard measure	2 00
1 Hitch weight	75	1 Metric bar in Case	10 00
1 Standard balance	150 00	2 Sets Standard dry measures	65 00
1 Oak cabinet	50 00	2 Sets Standard liquid measures	45 00
2 Prescription scales	50 00	1 Set Standard liquid measures incomplete	3 00
1 Troemner balance	60 00	1 100-ft. tape, steel	10 00
2 Sealers trip scales, old pattern	5 00		$1,218 25
1 Platform scale brass weights	75 00	Miscellaneous tools	35 00
1 Set Avoirdupois weights, one 50 lb., one 25 lb., one 20 lb., one 10 lb., one 5 lb.	25 00		$1,253 25
3 Sets Standard brass weights, 4 oz. to 4 lbs.	20 00		
Amount carried forward	$809 75		

Although the work of the department has been performed energetically, a portion of the City was not reached, viz., that portion north of Main Street, and Massachusetts Avenue to Hampshire Street, east of Prospect Street to Portland Street.

As will be seen by the statement of receipts, the revenue has been increased from about $500.00 in 1900, and $776.02 in 1901, to $932.02 for this year.

The portion of the City not covered this year would yield in fees about $60.00, so that should the entire City be covered in one year, and the adjustment fees and revenue from City scales remained the same, nearly $1000.00 would be the revenue from the department.

This year's expenses were increased by the accident to the scale at Lechmere Square, East Cambridge, it having been destroyed by the team of J. Manning & Sons, conveying a portion of a safe made by the Damon Safe and Iron Works; total weight of team and safe being nearly twenty-five tons.

The net expense of the department to the City for 1902 is $1,840.19, and would have been but $1,568.82 had it not been for the above mentioned accident.

The expense of adding necessary equipment must be expected each year in order to keep up with the work demanded.

The receipts will not increase correspondingly as a larger proportion of this increase in work to be performed will be office work, for which no fee can be charged.

STOREKEEPERS.

The condition of the weights and measures as used in the different places of business, as covered by this department last year, were found in good condition.

Those in that portion of the City not covered in 1901 were found in need of a considerable amount of adjusting. This was especially the fact as regards the weights.

PRODUCE PEDLERS.

Although we have a City Ordinance requiring a permit for peddling produce in the streets of the City, there are many teams doing such a business without having first obtained a license, and also without living up to the requirements named in such permits.

JUNK COLLECTORS.

The scales used by such dealers, as far as have been inspected, were generally in good condition, but in the case of both produce pedlers and junk dealers I would suggest that they be required to show a certificate of inspection from this department, for the measures and scales used, before the license or permit is issued.

One junk dealer was found with a scale which had not been sealed and which had evidently been fixed for the benefit of said dealer, showing a weight of twenty pounds when it should have registered twenty-five pounds.

This dealer was convicted and fined $50.00.

MILK DEALERS.

Much improvement has been made in this line of work, but there are still too many unsealed measures used in the distribution of milk.

Three milk dealers have been brought into Court for using unsealed measures, and have paid fines to the amount of $45.00.

One dealer, found guilty of using condemned jars, was fined $10.00.

COAL DEALERS.

In accordance with the authority given the Sealer of Weights and Measures by Section 89, Chapter 57, Revised Laws, the Sealer has caused teams loaded with coal, in transit to the consumer, to reweigh at the City scales, and the results obtained, as shown below, testify as to the accuracy in weighing by the coal dealers.

Twenty-one weighings were taken, covering in aggregate, 45,210 pounds, the result as obtained by the Sealer being 140 pounds, in excess of the weight charged by the dealers; the greatest difference in a load being forty-five pounds over in a load containing 3,595 pounds, and thirty-five pounds over in a load of 2,535 pounds.

The greatest shortage found was twenty-five pounds in a load of 1,475 pounds.

Of the seventeen large platform scales in use by coal dealers in the City, eleven have been thoroughly overhauled during the past summer.

There are in use in this City fifty-five platform scales, each of a capacity of 5,000 pounds or more, twenty-eight of which have been repaired during the past two years.

At the present time such scales can be considered as being in first-class condition.

Your attention is respectfully called to the increase in work performed, in comparison with that of the past five years, as shown by the table below.

	Total Inspected	Office Sealing	Sealing for Fees	Receipts
1897	37,243	30,582	6,661	$551 08
1898	36,589	29,841	6,668	502 09
1899	56,889	No record	No record	498 00
1900	52,397	No record	No record	517 29
1901	*30,510	*21,145	*9,365	*776 02
1902	98,262	86,041	12,221	932 02

*Eight months from May 1st.

DEPUTY SEALER.

In accordance with recommendation made by me last year, a Deputy Sealer was appointed in March, His Honor, the Mayor, selecting Mr. John C. Connors, who has faithfully filled the office, and to whom the Sealer feels greatly indebted for his hearty co-operation.

Respectfully submitted,

A. SHERBURNE K. CLARK,
Sealer of Weights and Measures.

ANNUAL REPORT OF OVERSEERS OF POOR

Central Square Building,
Cambridge, December 22, 1902.

To the Honorable, the City Council of the City of Cambridge :—

Gentlemen : — In submitting their twenty-fifth annual report the Overseers of the Poor of the City of Cambridge beg leave to refer to the change in the system of relief inaugurated a quarter of a century ago, by the first Board of Overseers elected under the statute passed by the legislature of 1877. Prior to this time there was no central office at which applications for aid could be made, and no visitor to investigate the question of settlement and to ascertain the necessity of granting it.

At this time a central office was established, a secretary to dispense aid, and a visitor were appointed, and the system of relief in use today, in its essential features, was adopted.

The Board of Overseers of the Poor at this period was composed of the following well known, public spirited citizens : —

Mayor Frank A. Allen, *ex officio* Chairman of the Board, J. C. Wellington, Charles E. Vaughan, Sumner Albee, George D. Chamberlain and Ezra Parmenter.

In their first annual report they refer to the new system of relief, "Whereby the actual condition of all persons applying for aid is ascertained by a visitor of the Board appointed for that purpose, and a careful inquiry made into their circumstances, their antecedents, prospects, and their claim which entitles them to aid by the law of settlement," and, after reference to the great amount of labor in determining questions of settlement, they continue, "this labor, which has been faithfully performed by the officers appointed, has resulted in a large degree to the pecuniary relief of the City without doing injustice to the deserving poor whom we are bound to aid and whom we may lawfully support."

Under the operation of the new system, in a single year, there was a reduction of more than eighteen thousand dollars in the cost to the City of supporting its poor, beside the moral gain of correcting an abuse of municipal charity which could not continue under careful investigation and the application of existing legal tests.

It is still a debatable question whether the best method of encouraging thrift in a community is by the granting of municipal aid, or whether

better work cannot be done by the friendly office of other organized charitable agencies. "Outside Aid," therefore, is a problem for earnest consideration.

In the early part of the year a committee was appointed to consider the matter of changing the system of book-keeping at the office of the Board. This Committee subsequently reported in favor of certain changes which were adopted by the Board.

On February 25, 1902, Patrick Crowley was elected, in joint convention by the City Council, a member of the Board, to fill the vacancy caused by the resignation of Charles James who was elected on March 19, 1901, in place of William W. Burrage, deceased.

On March 25, 1902, Jeremiah Crowley was elected by the City Council as an Overseer of the Poor for a term of five years from May 1, 1902, in place of John T. Shea, whose term expired.

In the last report the matter of payment of bills for care of contagious diseases was considered, and a recommendation was made to the City Council that such expenses should not be paid by the Overseers of the Poor because such payment would pauperize the sick persons and other members of the family. This recommendation of the Board, in addition to the endorsement of the City Solicitor, was approved by the City Council and the bills were paid from another appropriation.

The list of annual estimates for 1902, as prepared by the Board, were sent to the City Council on January 16, and the following appropriations were made: —

Outside aid, . .	salaries, $3,600	other expenses, $46,400		$50,000 00
City Home, . .	" 7,500	" " 11,500		19,000 00
Farm, . . .	labor, 4,200	supplies, 800		5,000 00
House Offal, . .	" 22,500	other expenses, 4,500		27,000 00
				$101.000 00

On November 11, one hundred dollars was transferred by order of the City Council from the appropriation for Farm — supplies to Farm — labor.

On November 18, one hundred dollars was transferred from Outside Aid — general expenses to Outside Aid — salaries.

On November 18, the following sums were appropriated,— to Farm — labor $290, to House Offal — labor $680, to House Offal —other expenses $656, total $1,625 — from the appropriation for Contingent Fund.

The following were the actual expenditures and receipts for the year, viz: —

OUTSIDE AID.

Expenditures: salaries, $3,684.25; other expenses, $39,015.36 . .	$42,699 61
Receipts: from relatives, $3,012.45; other cities and towns, $230.27; the State, $449.92	3,692 64
Net cost	$39,006 97

CITY HOME.

Expenditures: salaries, $7,466.77; other expenses, $11,494.28	$18,961 05
Receipts: board, $782.12; State, $44.57; grease and bones, $51.51; barrels, $21.26; old material, $5.38	904 84
Net cost	$18,056 21

FARM.

Expenditures: labor, $4,574.23; supplies, $692.67	$5,266 90
Receipts: produce, $5,095.76; stone, $2.61	5,098 37
Net cost	$168 53

HOUSE OFFAL.

Expenditures: labor, $23,179.50; other expenses, $5,140.30	$28,319 80
Receipts	9,722 83
Net cost	$18,596 97

During the year the number of persons at institutions for whom the City has been liable is as follows, viz.: —

City Home	155
Imbecile or idiotic, 3; blind, 2; epileptic, 3; insane, 8; deaf mute, 1; all others, 138.	
State Insane Hospitals	186
State Hospital, paupers	24
State Farm, paupers	1
Insane in families, 2 females, 1 male	3
State Hospital for Epileptics	12
State Hospital for Dipsomaniacs	10
Massachusetts School for Feeble Minded	16
Baldwinville Hospital Cottages for Children	3
Carney Hospital	14
Children's Hospital	2
Somerville Hospital	1
Boston City Hospital	41
Massachusetts State Sanitorium	2

There were ten at the Danvers Insane Hospital, eighty-one at the Worcester Insane Hospital, nineteen at the Worcester Insane Asylum, two at the Northampton Insane Hospital, twenty at the Westboro Insane Hospital, ten at the Foxboro Dipsomaniac Hospital, fifty-three at the Medfield Insane Asylum, twelve at the Monson Epileptic Hospital.

Two insane females and one insane male have been boarded in families, all under the supervision of the State Board of Insanity. There have been eight mildly insane cases at the Cambridge City Home in addition to the other insane supported by the City.

The amount paid to the State Insane Hospitals and private families for the 211 insane has been $28,036.13, which is $3,955.26 less than last

year. The amount paid the State has been reduced owing to the fact that the City denies its liability for Cambridge cases supported as insane at the State Hospital and the State Farm, which if paid for would have added about $3,893.60 to the entire expense for the insane dating from the time of denial of liability.

The relatives and families of the insane have paid $2,837.70 into the City Treasury, and other persons have paid $124.07. Other cities and towns have re-imbursed the City to the amount of $230.37 for aid rendered their poor living in Cambridge. The State Treasurer has paid $449.92 for support of cases having no settlement, which were aided from the office of the Board.

There have been 406 histories taken of new applicants for relief, consisting of 1,218 persons, 559 males, 659 females, 330 adults, 888 minors.

The City Physician has made 1,270 visits upon sixty-seven patients at the City Home, and he has also made 930 visits upon 398 patients outside of the institution. There were seventy-four examinations as to sanity, and thirty-seven certificates of insanity, dipsomania or epilepsy issued from his office. There has been paid from the Overseers of the Poor appropriation $194.53 for outside medicines and $203.58 for City Home medicines. Twelve dollars and fifty-five cents have been paid for Outside Aid surgical appliances, and $13.75 at the City Home. Ninety dollars have been paid for outside additional medical service and $10.00 for additional City Home medical service.

There were fourteen deaths at the City Home. Sixteen sick persons were sent to the hospitals. Twelve persons have received burial in the Cambridge Cemetery on Outside Aid account, at an expense of $132.25, and eight persons on the City Home account, at an expense of $83.05 for undertaker's service and interment. The oldest outside death was a person seventy years and the youngest was two years. At the City Home the oldest person who died was a man of eighty years, and the youngest was a man of thirty-eight years.

There have been 155 inmates in the City Home during the year, and there remained eighty-seven persons on November 30, 1902.

There have been eighty-eight families, embracing 260 persons, aided from the office of the Board during the past year. Fifteen of these families lived in old Wards 1 and 5, embracing twenty-nine persons, the population being 29,944. In Wards 2 and 4 there were fifty-eight families relieved, consisting of 177 persons, the population being 50,217. In Ward 3 there were fifteen families assisted, including fifty-four persons, the population being 13,999. The total population of the City was 94,160, as estimated from figures furnished from the office of the City Clerk.

RECAPITULATION.

Total expenditures for Outside Aid, City Home, Farm	$66,927 56
Receipts for the same	9,695 85
Net cost of care of poor	$57,231 71

Respectfully submitted,

CHARLES WALKER, *Wards 6 and 7 (Ward 4.)*
(Chairman.)
ALEXANDER MILLAN, *Wards 8 and 9 (Ward 1.)*
PATRICK CROWLEY, *Wards 3, 4 and 5 (Ward 2.)*
JEREMIAH CROWLEY, *Wards 1 and 2 (Ward 3.)*
CHARLES BULLOCK, *Wards 10 and 11 (Ward 5.)*

REPORT OF THE SUPERINTENDENT OF THE CITY HOME

CAMBRIDGE, December 1, 1902.

To the Overseers of the Poor: —

GENTLEMEN: — The annual report of Cambridge City Home for the year ending November 30, 1902, is herewith respectfully submitted.

The whole number in the Home during the year has been as follows: —

Males	78
Females	77
Total	155
Adults	137
Minors	18
Whole nnmber in the Home, November 30, 1902	87
Average number during the year	83

Included in the whole number in the Home, November 30, 1902, there are: —

INSANE OR DEMENTED.

Males	2
Females	6
Total	8

IDIOTIC OR IMBECILE.

Males	2
Females	1
Total	3

BLIND.

Males	1
Females	1
Total	2

EPILEPTIC.

Males	1
Females	2
Total	3

DEAF MUTES.

Males	1
Females	0
Total	1

Included in the whole number discharged during the year are twelve persons sent to other institutions as follows: —

To Carney Hospital	2
Cambridge Hospital	1
Catholic Home, Boston	1
State Home	2
Ear and Eye Infirmary	1
Massachusetts Epileptic Hospital	1
State Hospital	1
Temporary Home, Chardon Street, Boston	3

Remaining in the Home November 30, 1902: —

Males	44
Females	43
Adults	84
Minors, 2 boys, 1 girl	3

All statistics of general interest will be exhibited by the following tables: —

TABLE I.

Showing the number and sex of adult persons and minors of all classes received into the Cambridge City Home in each month of the year ending November 30, 1902.

Months.	Adults.		Minors.		Total.	Dependent Children.		Neglected Children.	
	M.	F.	M.	F.		M.	F.	M.	F.
1901.									
December	2	3	1	1	7	1	1	0	0
1902.									
January	2	0	0	0	2	0	0	0	0
February	5	3	1	0	9	1	0	0	0
March	3	0	0	2	5	0	2	0	0
April	3	1	1	0	5	1	0	0	0
May	2	3	0	1	6	0	1	0	0
June	0	7	2	3	12	2	3	0	0
July	6	0	0	0	6	0	0	0	0
August	1	3	0	0	4	0	0	0	0
September	4	3	0	0	7	0	0	0	0
October	3	1	0	0	4	0	0	0	0
November	3	2	0	0	5	0	0	0	0
Totals	34	26	5	7	72	5	7	0	0

TABLE II.

Showing the number and sex of adult persons and minors of all classes discharged from the Cambridge City Home in each month of the year ending November 30, 1902.

Months.	Adults.		Minors.		Total.	Dependent Children.		Neglected Children.	
	M.	F.	M.	F.		M.	F.	M.	F.
1901.									
December	2	2	1	1	6	1	1	0	0
1902.									
January	0	4	0	2	6	0	2	0	0
February	4	0	1	0	5	1	0	0	0
March	5	1	0	0	6	0	0	0	0
April	3	4	1	0	8	1	0	0	0
May	4	0	0	1	5	0	1	0	0
June	2	6	2	3	13	2	3	0	0
July	1	3	1	0	5	1	0	0	0
August	2	0	0	0	2	0	0	0	0
September	1	1	0	0	2	0	0	0	0
October	3	2	0	2	7	0	2	0	0
November	1	2	0	0	3	0	0	0	0
Totals	28	25	6	9	68	6	9	0	0

TABLE III.

Showing the name, age, date of admission, date and cause of death of each person who has died in the Cambridge City Home during the year ending November 30, 1902.

Name.	Age.	Date of Admission.	Date of Death.	Cause of Death.
James E. Doherty	38	Dec. 18, 1901	Dec. 19, 1901	Nephritis.
Edward Stevenson	45	Nov. 30, 1901	Dec. 3, 1901	Pneumonia. [Debility.
Jane Thompson	75	Dec. 10, 1901	Dec. 12, 1901	Surgical Shock and Senile
Margaret Lane	60	Sept. 26, 1899	Jan. 18, 1902	Heart Disease.
Hannah L O'Connell	71	Sept. 16, 1901	Jan. 13, 1902	Apoplexy & Cereb'l Softening
Stephen Stamper	41	Jan. 21, 1902	Feb. 8, 1902	Apoplexy & Cereb'l Softening
William De Sevren	63	Jan. 31, 1902	Mar. 6, 1902	Consumption.
John J. McKenna	47	Dec. 26, 1900	April 10, 1902	Heart Disease.
Zebina S. Brigham	67	Nov. 9, 1901	May 2, 1902	Heart Disease.
Edmund F. Foss	64	April 15, 1902	May 19, 1902	Consumption.
Ludwig Rohbbe	83	May 20, 1902	May 28, 1902	Consumpt'n. [Ter'l Dementia
William H. Briggs	73	Nov. 12, 1899	June 9, 1902	Apoplexy, Cereb'l Soften'g &
Charles Quinn	73	Sept. 14, 1885	June 28, 1902	Cerebral Softening.
Abby G. Southack	61	Nov. 6, 1901	Nov. 12, 1902	Pneumonia.

PRODUCTS OF THE FARM WITH THEIR APPROXIMATE VALUES.

395 bushels string beans	$310 00
7,214 bunches beets	175 00
300 bushels beets	150 00
140 bushels beet greens	35 00
9,000 cabbages	350 00
2,436 bunches carrots	75 00
100 bushels carrots	40 00
750 boxes celery	1,900 00
16,000 cucumbers	250 00
600 dozen eggs	180 00
2,600 dozen lettuce	495 00
575 bushels onions	490 00
350 bushels parsnips	225 00
1,000 pounds pie-plant	25 00
30 bushels peppers	1 00
100 bushels potatoes	675 00
4,868 pounds pork	395 52
800 dozen radishes	175 00
600 bushels spinach	65 00
5 tons squash	100 00
150 bushels Swiss chard	30 00
950 bushels tomatoes	450 00
	$5,997 52

COMPARATIVE TABLE OF CITY HOME, FARM, LEDGE, AND HOUSE OFFAL RECEIPTS FOR TWENTY-TWO YEARS ENDING NOVEMBER 30, 1902.

Years.	Board.	Chair Shop.	Farm.	General Sales.	Stone	House Offal.	Totals.
1881	$322 56	.....	$378 50	.....	$2,529 01	$5,536 88	$8,766 95
1882	705 34	.....	436 54	.....	2,626 17	5,705 22	9,473 27
1883	1,174 96	.....	476 22	$14 19	2,622 00	5,819 55	10,106 92
1884	1,480 93	.....	516 76	.....	4,238 77	6,449 96	12,486 42
1885	2,035 58	.....	335 32	149 85	4,509 84	7,354 26	14,384 95
1886	613 93	$37 50	772 14	319 75	5,611 38	6,926 23	14,280 93
1887	514 64	634 19	1,595 10	241 37	4,684 14	6,356 59	14,526 03
1888	557 28	614 94	2,846 52	213 62	6,662 26	6,721 50	17,617 86
1889	274 84	479 28	3 684 59	144 36	5,564 18	7,324 61	17,471 06
1890	502 49	794 36	4,364 03	150 89	5,651 38	7,386 33	18,649 48
1891	1,201 33	844 62	5,213 68	161 71	6,107 86	7,716 77	21,245 97
1892	1,253 06	899 81	5,371 60	166 45	5,220 50	7,535 57	20,447 55
1893	703 70	325 86	6,400 64	210 09	5,826 74	7,033 52	20,500 05
1894	1,094 89	220 07	6,504 66	615 69	7,955 42	8,218 96	24,609 69
1895	622 77	77 00	6.512 63	160 19	8,265 14	9,045 55	24,682 78
1896	834 52	61 25	5,623 67	147 02	7,639 48	9,155 35	23,461 24
1897	1,294 65	3 60	5,348 47	137 33	10,335 16	7,228 79	24,348 00
1898	1,038 19	.....	5,730 13	277 40	2,372 60	7,264 09	16,482 41
1899	703 17	.....	6,049 47	142 54	.....	6,997 40	13,892 58
1900	611 57	.....	5,082 43	137 40	.....	7,322 05	13,153 45
1901	793 32	.....	5,173 83	83 60	.....	8,016 71	14,067 46
1902	826 69	.....	5,098 37	78 15	.....	9,722 83	15,726 04
Totals	$18,960 41	$4,992 48	$83,315 30	$3,551 10	$98,222 03	$161,338 72	$370,381 09

The following percentages will exhibit the relative cost of the offal department as compared with last year.

The amount of offal collected the past year is nearly four per cent. greater than the previous year, the total cost of the department is less

than three per cent. greater, while the cash receipts are more than twenty-one per cent. greater than for the previous year.

The cash receipts from the Farm fall a little short of the amount of expenditures, but the increased inventory caused by the value of unsold products at the close of the year, will offset this deficiency and leave a few hundred dollars on the credit side of the ledger.

The nature of the duties of your Board renders it impossible for you to exhibit a very attractive financial statement. Yet your aggregate receipts from the four sources of revenue in this department (namely the Home, Farm, Ledge and Offal Department) in the last seventeen years amount to the very respectable sum of $315,162.58. Some of the industrial enterprises conducted through your agents show a gratifying credit balance in the period of their operation.

Our chair shop industry in seven years paid a net profit of . .	$2,641 90
The Farm in fifteen years	13,873 65
The Stone Ledge in eleven years	33,047 82
Total	$49,563 37

The following statistics concerning our population in the last seventeen years may not be entirely devoid of interest. On November 30, 1885, there remained in the Home 160 persons. Since that time there have been 2,105 admissions, making the total number for seventeen years 2,265. But it must be remembered that many have been received several times, and the total number of individuals must be much less. A careful examination of our records shows the total number of different persons to have been 1,740. Of this number 690 were men, 505 were women, 366 were boys, and 179 were girls.

The relatively large number of boys is explained by the fact that up to the Autumn of 1893, the Cambridge Truant School was maintained at the Home.

Of these 1,740 persons, 945 have been discharged to be cared for by their friends, or to enter industrial occupations outside; 414 have been transferred to other institutions; 294 have died and eighty-seven now remain in the Home.

Of those who have died 147 were men, of whom fifty were more than seventy years old; 133 were women, of whom fifty-five had passed their seventieth year; nine were boys and five were girls.

To my mind there are no social changes in life more replete with sadness, than when men and women of upright life and good character, in their declining years, through the failure of invested savings, the death of relatives, or other untoward events are reduced from competence to penury and a condition of absolute dependence. It is for such as these, who

encounter wreck and disaster when they had good reason to expect a prosperous close of the voyage of life — against whom there can lie no charge of idleness, waste or improvidence, that my reports have steadily urged protection from contact and enforced association with (such as are) the victims of a debasing appetite, and uncongenial companions for quiet and orderly people.

The record of the last seventeen years has shown that your Board has not disregarded the claims of your unfortunate charges to be surrounded by an uplifting environment and a moral atmosphere favorable to rest, quiet and contentment. May the time never come when the claims of brazen wickedness shall meet more favorable regard than the silence of unoffending misfortune.

Thanking your Board for uniform kindness, my officers for fidelity in the service of the City, and the public for helpful sympathy, this report is respectfully submitted.

MARTIN L. ELDRIDGE,
Superintendent.

REPORT OF THE CITY PHYSICIAN

1901—1902

CAMBRIDGE, MASS., November 30, 1902.

To the Honorable, the City Council of the City of Cambridge:—

GENTLEMEN:—In accordance with the requirements of Chapter 45 of the revised ordinances of 1892, a report of the doings of this office for the year ending November 30, 1902, is hereby rendered:—

CITY HOME.

Number of visits to the City Home	148
Number of persons treated therein	67
Number of professional visits to the same	1,270
Number of births at the Home	3
Number of deaths	14
Cost of medicines and surgical appliances furnished	$207 08

OUTSIDE AID.

Number of persons attended for the Overseers of the Poor	398
Number of professional visits to the same	930
Number attended where no application was made to the central office	103
Number of visits to the same	144
Number of examinations as to insanity	74
Number of certificates of insanity issued	37
Number sent to hospitals for treatment	16
Number of deaths	5
Cost of medicines and surgical appliances furnished	$207 08

DEPARTMENTAL SERVICE AND TOTALS.

Number of persons visited at the police stations	34
Number of visits to the same	38
Number of persons examined for the Law Department	20
Number of employees examined for injuries received	20
Number of vaccinations for the Health Department	1,165
Number of civil service examinations	39
Number of call men examined at the request of the Mayor	7
Total number of persons receiving professional attention	1,753
Total number of professional visits to the same	3,492

Respectfully,

LEWIS L. BRYANT,
City Physician.

REPORT OF THE TRUSTEES OF THE SANDERS TEMPERANCE FUND

The Trustees of the Sanders Temperance Fund submit herewith the thirty-seventh annual report of the Board.

Mr. James Hicks, Missionary under the provisions of the Sanders bequest, has faithfully continued his labors during the past year. He has visited, counselled and helped many unfortunates, suffering from the appetite for strong drink, and by his presence and influence in our local court, has had a large number of cases of drunkenness placed on probation.

In various other directions he has given his best energies towards "reforming old drunkards and preventing young drunkards, and abolishing as far as possible the use of intoxicating articles."

The reports of preceding years have so fully given the history of and purpose of the Sanders bequest, that a repetition of the story is deemed unnecessary at this time. As has been before stated, year after year, the Fund consists of $10,000.00 bequeathed to the City of Cambridge by Charles Sanders, a former citizen, in the year 1864. The interest of this sum is paid as a salary to the Missionary.

The report of the latter, which is hereto appended, is a statement of what he has accomplished during the year.

JOHN H. H. McNAMEE,
JAMES F. AYLWARD,
THORNDIKE SPALDING,
Trustees of Sanders Temperance Fund.

December 26, 1902.

To the Trustees of the Sanders Temperance Fund:—

GENTLEMEN: — In accordance with your requirements and the custom of past years, I herewith present my report for the year 1902.

Throughout the year my aim and object has been the reformation of the drunkard and the betterment of the homes of the unfortunate. In order that I might accomplish this, I have labored through various channels which I shall name, each giving me the opportunity of coming face to face with the unfortunate slave of alcohol,—the District Court, the

House of Correction, the Public Temperance Meeting. Evening office hours at my home from 6 to 7.15, and my daily visits to homes of sorrow. I will give a summary of the work done through the varied means named.

DISTRICT COURT.

First the District Court: I have been in attendance, as has been my custom, and that of my predecessors, daily at the sessions. Interviewed and advised with the unfortunate, both men and women, and wherever either have shown any signs of reform or sorrow for their habit, I have urged the pledge of total abstinence, pleaded on their behalf with the Court, who never turns a dull ear to such an appeal when made in the interest of the unfortunate drunkard.

I cannot lay too much stress on the good work done through the Court, men have reformed, man and wife far apart have been brought together. The neglected children of such parents have been cared for. Homes laid waste through strong drink, have been built up. In this work I could do but little were it not for the long suffering mercy shown by the presiding Judge and his associates, who give the opportunity to work in such cases by continuing them from time to time for the reformation of the individual.

HOUSE OF CORRECTION.

I have made visits to the House of Correction and gaol through the year, interviewed and advised with a good number of prisoners, and I am pleased to report many reformations, especially among the men after they are released. I have received several letters from men who have left the institution stating that they had abandoned their old ruinous habit and were leading honest, sober lives. These men are never ungrateful for the kind, hopeful, encouraging word. I have attended the religious services every Sunday morning in the Chapel, and have done what I could to interest the inmates in the service. I have collected and had delivered to the prisoners after chapel service, many thousands of pages of literature, good interesting reading. I have tried to aid the women prisoners in whatever way seemed for the best, sometimes getting them employment after their discharge. The prison work to my mind is of great importance.

PUBLIC TEMPERANCE MEETINGS.

There are many temperance societies who carry on the temperance reform in our City and are each doing good work. Among these may be

named four public temperance meetings which are held weekly in different parts of the City. At these meetings alone over one thousand persons have taken the pledge of total abstinence, during the year and many are living sober, honest, industrious lives with happy homes and many friends.

These meetings are sustained and officered by reformed men who pay several hundred dollars hall rents yearly in order that they may come together and open wide the temperance door to the unfortunate companion they left behind. Surely this is good work and God has wonderfully blessed it. I have been present at most all of these meetings during the year, encouraging with my presence and word, the God-given movement. I have attended 208 such meetings.

VISITS TO FAMILIES.

I have visited 1,856 families, where I have, in every case, been most thankfully received. It would be impossible for me to give any idea of the conditions that met me in these homes of sorrow. The once happy wife and mother's tale of woe had to be listened to, and as she related her sad experience since her husband took to strong drink, her struggle for a livelihood for her large family, and her present almost hopeless condition, one could but wish the dreadful traffic out of existence that alone could be responsible for such suffering. I have made, among the number, many calls to such homes, and I trust I have in some measure been helpful. The experience of many of the poor suffering mothers has changed, and where a year ago there was nothing but despair, today, there exists happiness, through sobriety.

EVENING OFFICE HOURS.

Over one thousand persons have come to me during the course of the evening, most of this number being unfortunate mothers seeking advice in regard to unfaithful husbands and fathers who fail to support their families. Many are directed to the Court to make complaint for non-support, others are sent to the Society for the Prevention of Cruelty to Children; but never are these steps taken until I fail to produce a change in the unnatural parent, whom very often, no means but the Court can teach the salutary lesson. These calls during my evening office hours have doubled during the past years. I know of several men, the heads of large families, who were given to strong drink, who have come in to speak with me on these evening occasions and before leaving have taken the pledge. They are keeping it, and have comfortable, happy homes, free from drink.

CAST OFF CLOTHING.

For several years past, through the kindness of our local press, I have been enabled to reach the charitably disposed and have gathered in much clothing which I have distributed among the needy, deserving poor. During last winter I was in this way enabled to assist 154 families. The good work goes on this winter and I trust I shall be enabled at least to help the same number as last. This work, like all of the rest, gives me a a great deal of pleasure.

I may here cite a single case. On Dec. 19th, I took a bag of all kinds of clothing to a poor family, numbering thirteen in all, eleven children, father not long off a bed of sickness. Gratitude filled the heart of the, poor mother when she said "God bless you." I receive many other expressions of gratitude from the needy and deserving poor for this charity.

NO-LICENSE.

This year as never before in our history as a No-License City, have we reason to render thanks to God for the very great and glorious victory at the polls for no-license. No City in our Commonwealth can boast of such a majority. May we ever be faithful to the interest of our beloved City in temperance lines. Then indeed will the church, the school, the home, and our people as a whole prosper.

I have recorded the various methods and means used by me for the furtherance of the Temperance Reform in our City during the year. The results are only known to Him who inspired the philanthropic donor of the fund. I have endeavored in my every day life to carry about with me the spirit of this lover of humanity. The old drunkard has been cared for in and out of Court, and the young drunkard warned of the impending danger. I have also, so far as has been in my power discouraged the use of all alcoholic drinks.

All of which is respectfully submitted,

JAMES HICKS,
Missionary.

REPORT OF THE COMMISSIONER FOR THE BOSTON AND CAMBRIDGE BRIDGES

CAMBRIDGE, MASS., December, 1902.

To the Honorable, the Mayor and City Council of the City of Cambridge:—

SIRS:—The Commissioner for the Boston and Cambridge Bridges having the charge of the Harvard, West Boston, Craigie, Prison Point, Brookline Street, River Street, Western Avenue, and North Harvard Street bridges, submits his annual report of the matters pertaining to said bridges.

HARVARD BRIDGE.

At the date of my last year's report the paving of the roadway with wooden blocks had not been completed on account of the stormy weather, and we deemed it best to wait till this year before completing the work. This spring the work was finished and gives good satisfaction. The surface of the roadway makes very easy wheeling for vehicles, and teamsters and others seem to be quite pleased with the change from the old and unsatisfactory way of replanking every year and constantly patching the surface after six months' wear, also the splinters from the planking and the dust which made it very disagreeable to passengers riding in the cars is very much less than with the old floor. The wooden block paving also requires less cleaning.

This next year the deck of the draw will require reconstruction, as it is getting out of shape, and possibly we may pave it with wood blocks.

The sidewalks for the entire length of the bridge should be replaced with hard pine plank. The present asphalt sidewalk is in very bad condition. It is very badly broken and the planking under it is very much decayed. We have patched it this last year to make it safe.

The surface of the draw piers on each side of the draw is in poor condition and ought to be replanked this next year. We have repaired the capping this year and made some repairs to piers to make them safe.

The draw-tenders' house painted outside and inside with two coats of paint, the work being done by the draw-tenders employed on the bridge, making quite a saving to the two cities. The men have also done quite a lot of other repairs.

The iron fence will need painting this next year.

Electric lights give good satisfaction and make a fine illumination nights, and create a better effect than on any bridge in the vicinity of Boston and Cambridge.

The traffic over the bridge is increasing every year.

How could the public get along without this bridge? The projectors are to be honored for their far-sightedness.

The draw-tenders clean the electric light globes, see to keeping the sidewalks free from snow and ice in winter, and do all ordinary repairs.

WEST BOSTON TEMPORARY BRIDGE.

The traffic on this bridge is increasing, making it necessary to replank it every year. The flaps to draw were repaired and new hinges placed on the flaps and draw.

The draw-tenders employed on the bridge sweep the sidewalk in summer and keep it free from snow and ice in winter, and do all ordinary repairs.

We expect the new Cambridge bridge will be completed in about three years. When completed it will be the finest structure in the United States.

CRAIGIE BRIDGE.

On the Cambridge end of bridge the sidewalk was repaired by putting in two-inch spruce plank and replaced the brick; the house was shingled and repaired; the paving on the roadway was repaired from the draw to the Cambridge end of the bridge.

On the Boston side, down stream, a new sidewalk was built for the whole length; the old timbers and planking that were very much decayed were taken out and replaced by new hard pine timber and hard pine flooring; the edgestones were reset and the walks paved with new brick. The roadway was repaired for the whole length.

The draw is in very bad shape; it has been repaired where it was actually necessary to make it safe with new hard pine timbers and planking. Next year there will have to be a good deal done to it, as it is quite old. There is more teaming over this bridge than over any other bridge in Boston. It has to be watched very closely so that no accidents will

occur. When the new Cambridge bridge is completed there will have to be a new and wider bridge built to take the place of this old structure.

The guard on the Cambridge side to protect the bridge from damage by vessels colliding with it had to be rebuilt. Oak piles were driven and capped with hard pine timbers and braced securely to piles connected with the bridge. The draw piers were repaired and the small house on the pier shingled.

The draw-tenders employed on the bridge sweep the sidewalks and keep them free from snow and ice in winter time, and do all ordinary repairs.

PRISON POINT BRIDGE.

The iron girders under the draw were in such bad condition, broken and twisted in such a way that it was impossible to repair them, and to put in new ones would cost a large sum of money. We did not think it wise to expend much at the present time, as it is expected in one year it will be taken away.

To relieve the draw from the great weight going over it all the time, the roadway was narrowed by putting sidewalks two feet, six inches wide for pedestrians to walk over. This was done to keep the teams off the weakest places. If this had not been done we should have had to close the bridge to travel.

Some of the timbers under the bridge supporting the roadway were so much decayed at the ends they had to be pieced out with new hard pine timber and other timbers had to be blocked up. Iron rods were put through the girders to keep them in place. This work was done from float staging under the bridge. Four-inch plank were put on the bridge and draw, and all sheathed with two-inch spruce plank.

The Boston and Maine Railroad Company are now driving piles to support a temporary bridge across the river and are going to build a draw to take the place of the old one now there. After crossing the river, they are going to extend a temporary overhead street to Bridge Street in Cambridge. The railroad company are doing this so as not to stop travel while building the permanent overhead structure on the line of the present street leading from Cambridge to Charlestown, which, when completed, will be a great benefit to the public and do away with a most dangerous place, and prevent the present great delay while the street is closed by trains passing over it.

In addition to the repairs mentioned above, there has been a number of other repairs made to make the bridge and draw safe for travel.

The draw-tenders employed on the bridge sweep and clean snow and ice from bridge when necessary.

BROOKLINE STREET BRIDGE.

Almost the entire surface of the roadway was sheathed and four-inch spruce plank put in where necessary. The draw and sidewalk were repaired.

The fences for the entire length of the bridge guards, and the houses on the draw pier have been painted. This work was done by the draw-tenders employed on the bridge. They also sweep the bridge once a week in summer and keep the sidewalks free from snow and ice in winter, and do other ordinary repairs.

There has been a petition sent to the City Council by citizens living in the vicinity of this bridge, asking permission to have the Boston Elevated Railway Company put two tracks over the bridge to connect with the tracks on the Boston side of the bridge and no doubt it would be a great convenience to the public. To make the bridge safe for that purpose would require a large outlay, and whether it would be advisable at the present time to do this work, or wait till the two cities are in condition to build an overhead bridge, wider than the present structure, is a question. It seems to me the time will soon come when the new overhead bridge will have to be built. The repairs necessary to make the present bridge safe for the cars to go over would cost in the vicinity of $17,000, and after making the repairs, you would have a very narrow bridge, not suitable for the traffic going over it.

RIVER STREET BRIDGE.

The deck of the bridge was repaired by putting down four-inch plank, and the bridge and draw sheathed with two-inch spruce plank. The fence on draw was repaired and strengthened by putting on new capping. The fences on the bridge and draw, the draw posts and the houses on the draw piers have been painted.

This work was done by the draw tenders. They also sweep bridge and piers and keep them free from snow and ice and do ordinary repairs.

The draw-tenders on this bridge also do the work on Western Avenue bridge.

WESTERN AVENUE BRIDGE.

On the Boston side, the deck of bridge and draw was repaired with four-inch spruce plank and sheathed with two-inch spruce plank; new flaps to draw were built; and the fence on the draw was repaired by putting in new rails. The capping and surface of the down-stream pier was

so much decayed that it was deemed best to put in new timber and plank to protect it and make it safe and secure.

The fences, the draw posts and the houses on the pier were painted. This work was done by the draw-tenders employed on the bridge. The draw-tenders also do the cleaning and ordinary work.

NORTH HARVARD STREET BRIDGE.

The fence on the draw was repaired by putting on new rails; the bridge and draw was sheathed with two-inch spruce plank, and other repairs made.

The fences for the entire length, the draw, draw posts, and the houses on the piers were painted. This work was done by draw-tenders employed on the bridge. They also do all ordinary repairs, sweeping bridge and draw, and cleaning snow and ice from bridge and piers.

WILLIAM J. MARVIN,
Bridge Commissioner.

December 1, 1902.

FINANCIAL STATEMENT.

DECEMBER 1, 1901, TO NOVEMBER 30, 1902.

	Salaries.	General Expenses.	Totals.
Appropriation . . .	$10,050 00	$6,950 00	$17,000 00
Expended . . .	10,002 76	6,925 34	16,928 10
Balance December 1, 1902	$47 24	$24 66	$71 90

Revenue $805.00. One-half, $402.50 was paid to the City of Boston.

NUMBER OF TIMES THE DRAWS IN THE BOSTON AND CAMBRIDGE BRIDGES HAVE BEEN OPENED, AND THE NUMBER OF VESSELS WHICH HAVE PASSED THROUGH FOR THE YEAR BEGINNING DECEMBER 1, 1901, AND ENDING NOVEMBER 30, 1902.

Date.	Canal or Craigie's.		Harvard.		Prison Point.		West Boston.		River Street.		Brookline Street.		Boylston Street.		Western Avenue.	
December 1, 1901. November 30, 1902.	No. of Draw Openings.	No. of Vessels Passing Through.	No. of Draw Openings.	No of Vessels Passing Through.	No. of Draw Openings.	No. of Vessels Passing Through.	No of Draw Openings.	No. of Vessels Passing Through.	No. of Draw Openings.	No. of Vessels Passing Through.	No of Draw Openings.	No. of Vessels Passing Through.	No. of Draw Openings.	No of Vessels Passing Through.	No. of Draw Openings.	No. of Vessels Passing Through.
December, 1901	236	359	50	74	36	61	45	74	43	66	65	43	14	22	21	23
January, 1902.....	127	196	14	20	49	80	14	20	8	11	10	14	6	8	6	8
February, "	135	179	14	19	33	50	12	19	6	11	6	11	..	..	..	..
March, "	185	283	18	26	39	67	84	214	12	18	14	23	6	8	5	7
April, "	284	587	63	97	37	64	100	223	34	54	36	56	22	35	23	36
May, "	275	567	63	92	50	82	64	106	48	73	45	73	19	29	26	41
June, "	204	335	43	58	40	53	76	132	34	75	40	85	7	11	29	65
July, "	234	377	35	51	26	40	34	58	27	68	29	66	12	22	21	59
August, "	252	363	34	49	30	48	57	76	23	34	25	37	12	18	14	21
September, "	233	351	21	33	32	49	28	40	21	31	23	35	15	22	21	30
October, "	231	351	49	73	53	96	51	79	20	32	28	44	10	15	8	13
November, "	203	307	57	88	93	168	55	93	36	58	59	95	18	26	18	26
Totals.	2,599	4,255	461	680	518	858	620	1,134	312	531	380	582	141	216	192	329

ANNUAL REPORT OF THE CITY AUDITOR

City Auditor's Office,
Cambridge, December 1, 1902.

To the Honorable, the City Council:—

The undersigned herewith presents the annual statement of the receipts and expenditures of the City of Cambridge for the fiscal year beginning on the first day of December, 1901, and ending on the thirtieth day of November, 1902.

The first part of this report is devoted to an exhibit of the receipts and expenditures of the City arranged upon the Schedules for Uniform Municipal Accounting recommended by the National Municipal League, of which an explanation is given upon succeeding pages. Following these schedules are the usual matters presented in the City Auditor's report including a schedule of the City property.

Respectfully submitted,

HARRY T. UPHAM,
City Auditor.

27 State Street, Boston,
January 10, 1903.

Harry T. Upham, Esq.,
City Auditor,
Cambridge, Mass.:

Dear Sir: In confirmation of recent conferences with the Mayor and with yourself concerning the examination of the accounting system and annual reports of your City, now in progress, I desire to submit the following suggestions: —

First. That your annual financial report for the year 1902 (ending November 30), be published upon the standard schedules and forms of the National Municipal League, already submitted to you.

Second. That as these standard schedules A–I. to A–VII. inclusive can be followed exactly, they should precede all other tables in your report, but that the detailed schedules, A–VIII., should be issued in your ordinary forms for this year, inasmuch as you have already made a large number of these tables in your usual way, and there is not sufficient time before your report goes to press to make the necessary changes.

Third. As an explanation of the National Municipal League's schedules for Uniform Accounting, I submit the following: —

The first important feature of the system is the distinction between "revenue" and "expense" accounts, "A" schedules, which are statements of the receipts and expenditures of the fiscal year, and the "Balance Sheet" accounts, "B" schedules, which are statements of the condition of the City's assets and liabilities at the end of the fiscal year.

The second important feature of these schedules is the arrangement of the summaries or statements of totals. These follow in order of importance, and precede the detailed statements in every case, *i. e.*, first appear consolidated summary statements. (Schedule A–I., B–I., etc.) Then subsidiary detailed statements of the items in the first schedule, then more detailed statements of the items in the secondary schedules, and so on down to the least important details of the accounts.

The third important feature is the emphatic distinction between "ordinary" revenue and expense, and "extraordinary" revenue and expense. The former relates only to the income of the City from ordinary sources, excluding sales of bonds and other capital accounts; and to the expenditure of the City for ordinary running expenses, *i. e.*, for operation and maintenance. The latter — extraordinary — relates only

to income from extraordinary sources, like borrowed money, bonds sold, etc., and to expenditures for permanent construction or other capital outlay.

The fourth important feature, and the one which is practically the creation of the league, is the arrangement of the totals and afterward the details of the department's accounts, not in alphabetical order, as has been the customary method heretofore in city accounts, which renders all comparison forever misleading and difficult, but in an order based upon the general purpose or function of each department of the municipal government.

Schedule A–I gives the consolidated summary of the total cash receipts and expenditures for the fiscal year (not including duplicated items, which are given elsewhere,) the excess or deficiency of receipts for the year and the balances of cash on hand at the beginning and at the end of the year.

Schedule A–II. divides the total revenues and expenditures into distinct categories, "ordinary," "extraordinary," and "trust funds," the totals of which make up the items in Schedule A–I. above, and "temporary accounts," which give the total duplications of entries necessary for book-keeping reasons only.

Schedule A–III. takes up a more detailed study of the "ordinary" and "extraordinary" items arranged in groups, according to general purposes or functions.

Schedule A–IV. expands the items of the previous schedule in still more detailed figures and gets down to the receipts, appropriations and expenditures by departments and divisions still grouped according to the League's system.

Schedule A–V. and VI. are for trust funds and temporary accounts.

Schedule A–VII. takes up the budgetary questions, balances forward, appropriations, additions, expenditures and balances remaining, transfers to and from, etc., with the departments still grouped as before, and, finally,

Schedule A–VIII. consists of the ultimate details of each department accounts, so far as the auditor's reports will deal with them, taken up in order separately and with sufficient space given to each so that all the important divisions of expenditure, viz.: salaries, expenses rent, lighting, printing, etc., can be completely set forth. As previously mentioned, Schedule A–VIII. is not presented in standard form this year for the reasons given.

It will be seen that the schedules progress consistently and steadily from the gross statements to the details, each schedule being an amplification of the preceding one and in complete harmony with it, and all

arranged upon a definite, consistent and uniform system applicable to any and all municipal accounts.

The second grand division of the schedules relates to the assets and liabilities of the City, labeled "B," and these are also logical and clear. B–I. gives the assets and liabilities in gross figures arranged to show, first, the total current assets (cash, taxes not yet collected, etc.), as against the total current liabilities (vouchers not paid, etc.), and, secondly, the contingent or doubtful assets and liabilities; thirdly, the trust funds and special deposit accounts for which the City acts as agent or trustee, and, finally, the actual sinking funds on the asset side contrasted with total bonded debt on the liability side.

The permanent but not available assets of real estate, buildings, equipments, etc., are also stated and offset by a balance account or surplus.

Thus a concise and accurate statement of the financial condition of the City at the end of the year is given at a glance. The succeeding "B" schedules are amplifications of the items in this first schedule up to and including B–VII., and thereafter may be carried out by succeeding schedules into any details which are considered important by the officials in any particular city.

The vitally important point in the balance sheet is this, namely, that there shall be clearly shown the actual "available assets" (cash and receivables) of the City distinct and separate from the "fixed assets" (real estate, buildings, etc.), which are in reality estimates of value only, which are unavailable for purposes of paying the debts of the City. "Available assets" should include cash in office and at banks, securities, stocks of supplies on hand, accounts receivable, taxes collectible, sinking funds, etc., and against these should be clearly set forth on the other side of the balance sheet the actual liabilities of the City, viz.: the bills and warrants unpaid, interest due, temporary loans unpaid, judgments unpaid, other floating debts and total bonded debts.

In this manner the actual condition of the City's finances is disclosed, and the average citizen, or official, cannot be misled.

Yours very respectfully,

HARVEY S. CHASE,
Public Accountant and Auditor.

REPORT OF CITY AUDITOR

Arranged according to the Uniform Schedules of the National Municipal League.

SCHEDULE A–I.

Revenue and Expense of the Fiscal Year.

CONSOLIDATED STATEMENT.

Cash Balance at beginning of the year		$276,544 65
Actual Receipts* during the year	$2,919,713 42	
Actual Disbursements* during the year	2,996,288 59	
Excess of Disbursements		76,575 17
Cash Balance at end of the year		$199,969 48

This Balance includes the following balances of special funds and accounts: —

Cambridge Bridge	$6,098 32	
Harvard Bridge	289 29	
Dredging at outlet of Bridge Street Sewer	2,672 78	
Improved Sewerage	6,848 24	
Land for Hospital	6,500 00	
Land Damages	6,898 08	
Park Construction	793 95	
Public Library Addition	1,359 38	
New Schoolhouse "Washington"	23,555 96	
New Schoolhouse "Willow Street"	60,965 14	
Sundry Streets, "Street Railway Tax"	69,747 61	
Water Works, Construction	11,025 61	
Water Works, Interest	3,160 00	
		199,914 36
Leaving a net balance of free cash in treasury		$55 25

* Omitting duplications, which are set up separately in Schedules A–II. and A–VI.

SCHEDULE A–II.

General Exhibit of Receipts and Expenditures of the Fiscal Year.

Separated under the four heads, "Ordinary," "Extraordinary," "Trust Funds," and "Temporary Accounts."

	Receipts.	Expenditures.
Ordinary. (Operation and maintenance)..... (For details see Schedule A–III)	$2,427,263 10	$2,449,487 79
Extraordinary. (Construction, &c.)..... (For details see Schedule A–III.)	488,788 82	543,139 30
Trust Funds..... (For details see Schedule A–V.)	3,661 50	3,661 50
Total Actual Cash Transactions of the Year. (Omitting duplications)..... (Per Schedule A–I.)	$2,919,713 42	$2,996,288 59
Temporary Accounts. (Duplications)..... (For details see Schedule A–VI.)	645,000 00	645,000 00
Total transactions, per City Auditor's books.....	$3,564,713 42	$3,641,288 59

Ordinary has relation only to the current revenues and "running expenses" (operation and maintenance), and does not include receipts or payments on account of loans, nor on account of permanent construction or other capital accounts.

Extraordinary has no relation to current revenue or running expenses, but does include receipts and payments on account of loans, and for permanent construction and other capital accounts.

Trust Funds include all receipts and payments of the City when acting as trustee or as agent for funds, trusts, special deposits, etc , which cannot be used except for particular and specified purposes.

Temporary Accounts include all receipts and payments of the City which are simply journal items, duplications, or items paid in, temporarily held and paid out again, and must give the same figures for both receipts and expenditures.

ACTUAL FINANCIAL RESULT OF THE OPERATION AND MAINTENANCE OF THE CITY FOR THE YEAR.

Ordinary Receipts, as above, from taxation and other sources, not including money borrowed.....	$2,427,263 10
Ordinary Expenditures, as above, for operation and maintenance (running expenses).....	2,449,487 79
Excess of Ordinary Expenditures for the year.....	$22,224 69

(Excess of Extraordinary Expenditures $54,350.48 additional.)

SCHEDULE A–III.

Exhibit of Receipts and Expenditures for the Year, Ordinary and Extraordinary, Grouped According to Functions.

ORDINARY.*

	Receipts.	Expenditures.
General Government	$10,710 22	$96,339 95
Protection of Life, Health and Property	22,204 20	337,967 20
Public Charity and Correction	24,984 97	93,920 80
Public Ways and Wastes	17,930 15	441,130 35
Public Industries and Investments	336,975 41	70,945 97
Public Education	9,231 23	459,049 07
Public Art and Recreation	2,004 15	127,073 59
Public Indebtedness. (Transactions during the year)	17,445 90	281,842 12
Public Interest	12,260 30	344,065 76
Public Taxation	1,957,093 77	197,142 00
Special Assessments. (Street Betterments, etc.)	16,422 80	.....
Unclassified	.....	10 98
Total of Ordinary (per Schedule A–II)	$2,427,263 10	$2,449,487 79

EXTRAORDINARY.*

	Receipts.	Expenditures.
General Government	$884 00	$395 00
Protection of Life, Health and Property	9,590 61	1,055 52
Public Charity and Correction	.....	.....
Public Ways and Wastes	86 00	391,387 03
Public Industries and Investments	749 50	32,943 59
Public Education	258 10	61,829 22
Public Art and Recreation	.....	55,528 94
Public Indebtedness. (Transactions during the year)	458,000 00	.....
Public Interest	.....	.....
Public Taxation	.....	.....
Special Assessments. (Street Betterments, etc.)	19,220 61	.....
Total of Extraordinary (per Schedule A–II.)	$488,788 82	$543,139 30

* For details see Schedule A–IV.

SCHEDULE A–IV.

EXHIBIT OF RECEIPTS, APPROPRIATIONS AND EXPENDITURES, DIVIDED INTO ORDINARY AND EXTRAORDINARY, AND ARRANGED BY DEPARTMENTS AND DIVISIONS, WHICH ARE GROUPED ACCORDING TO THEIR FUNCTIONS AS IN THE PRECEDING SCHEDULE.

1. GENERAL GOVERNMENT.

	Receipts.*		Appropriations.	Expenditures.	
	Ordinary.	Extraordinary.		Ordinary.	Extraordinary.
1.1 Mayor's Department	.....	.....	$5,400 00	$5,388 00	.....
1.2 Councils:					
City Messenger's Department	.....	.....	2,700 00	2,030 45	.....
Clerks of Committees	.....	.....	4,000 00	3,999 02	.....
City Council's Expenses	.....	.....	Contingent	3,704 75	.....
City Clerk's Department	$2,784 68	.....	7,586 00	7,566 75	.....
	$2,784 68	.....		$17,300 97	.....
1.3 Law Department	525 00	.....	5,000 00	5,046 01	.....
1.4 Finance:					
Auditor's Department	.....	.....	3,700 00	3,773 65	.....
Assessing Department	.....	.....	13,300 00	13,659 86	.....
Treasurer's (and Collector)	2,931 33	.....	15,500 00	15,378 85	.....
Sinking Fund Officials	.....	.....	Contingent	405 00	.....
	$2,931 33	.....		$33,217 36	.....
1.5 Elections:					
Election Dept., City Clerk	.....	.....	5,700 00	6,224 92	.....
" Registrar of Voters	.....	.....	3,500 00	3,162 95	.....
" Sup't B'ld'gs	.....	$884 00	2,250 00	3,288 68	.....
Voting Booth	.....	.....	400 00	.....	$395 00
Notifying Voters	.....	.....	Contingent	183 50	.....
	.....	$884 00		$12,860 05	$395 00
1.6 City Hall:					
City Buildings Account	3,368 00	.....	17,000 00	17,328 69	.....
1.7 Miscellaneous:					
Postage and Stat'ry, Messenger	1,071 21	.....	1,200 00	1,192 09	.....
Paige's History	18 00	.....	.....	.....	.....
Proprietor's Records	12 00	.....	.....	.....	.....
Inauguration Day	.....	.....	Contingent	30 00	.....
Prince Henry's Reception	.....	.....	Contingent	283 06	.....
Gray Hearing	.....	.....	Contingent	3,685 72	.....
Searching Records	.....	.....	Contingent	8 00	.....
	$1,101 21	.....		$5,198 87	.....
Total General Government	$10,710 22	$884 00	.....	$96,339 95	$395 00

* These receipts have been entered in all the schedules under the department title in which they originate, although they are not placed to the credit of these departments, but are placed in the general treasury as income for general appropriations.

SCHEDULE A–IV.—*Continued.*

2. PROTECTION OF LIFE, HEALTH AND PROPERTY.

	Receipts.		Appropriations.	Expenditures.	
	Ordinary.	Extraordinary.		Ordinary.	Extraordinary.
2.1 Police Department	$743 31		$129,000 00	$131,251 70	
2.2 Fire Department	130 00		93,500 00	93,083 78	
2.2a Fire and Police Telegraph:					
Electrical Department — Wire Account	167 66		10,000 00	9,998 71	
2.3 Courts:					
Fines — Police Department	3,800 70				
2.4 Health Department:					
Salaries and General Expenses			17,000 00	16,933 81	
Small-pox Hospital			46,600 00	47,007 68	
Temporary "			10,000 00	9,999 58	
Land for Hospital			6,500 00		
Commonwealth of Mass., etc.	4,976 43				
Inspector of Milk and Vinegar			1,680 00	1,674 28	
Inspector of Provisions, salaries, etc			800 00	777 00	
	$4,976 43			$76,392 35	
2.5 Cemeteries and Crematories					
Salaries and Labor			15,000 00	15,008 22	
General Expenses			2,000 00	2,442 71	
From Burials, etc	10,354 07				
Filling Low Lands			1,055 73		$1,055 52
Sales of Lands and Lots		$9,590 61			
	$10,354 07	$9,590 61		$17,450 93	$1,055 52
2.6 Inspectors:					
Superintendent of Buildings			6,400 00	6,391 99	
Plumbers' Examiners Dept			100 00		
Sealer of Weights and Measures	932 03		2,500 00	2,772 22	
2.7 Militia and Armories:					
Armory, Beech Street			300 00	61 00	
Rifle Range			400 00	341 28	
Car Tickets to and from Armories, etc			Contingent	223 24	
Commonwealth of Mass	1,100 00				
2.8 Miscellaneous:					
Total Protection Life, Health and Property	$22,204 20	$9,590 61		$337,967 20	$1,055 52

SCHEDULE A–IV.—*Continued.*

3. PUBLIC CHARITY AND CORRECTION.

	Receipts.		Appropriations.	Expenditures.	
	Ordinary.	Extraordinary.		Ordinary.	Extraordinary.
3.1 Hospitals:					
3.2 Insane:					
Outside Aid—Care of Insane...	.....	.....	(Overseers of Poor)	$28,036 13	.....
3.3 Houses for Children, Aged, Deaf, Dumb, Blind, etc.:					
3.4 Almhouses:					
City Farm.....	$5,098 37	.....	$5,000 00	5,266 90	.....
City Home.....	904 84	.....	19,000 00	18,961 05	.....
	$6,003 21			$24,227 95	
3.5 Out-door Relief:					
Overseers of the Poor Department—Salaries.....	.....	.....	3,600 00	3,684 25	.....
Overseers of the Poor Department—General Expenses (less care of Insane).....	3,692 64	.....	46,400 00	10,979 23	.....
City Physician.....	.....	.....	1,500 00	1,500 00	.....
	$3,692 64			$16,163 48	
3.6 Lodging Houses:					
3.7 Prisons and Reformatories:					
3.8 Workhouses:					
3.9 Miscellaneous:					
State Aid—Soldiers' Relief....	15,289 12	.....	25,500 00	25,493 24	.....
Total Public Charity and Correction	$24,984 97			$93,920 80	

SCHEDULE A–IV.—*Continued.*

4. PUBLIC WAYS AND WASTES.

	Receipts.		Appropriations.	Expenditures.	
	Ordinary.	Extraordinary.		Ordinary.	Extraordinary.
4.1 Administration:					
Engineering Department			$10,800 00	$10,027 98	
Salaries — Superintendent of Streets and office			4,000 00	4,198 25	
				$14,226 23	
4.2 Opening, Grading and Widening Streets:					
Land Damages			42,497 32		$35,599 24
Street Construction			40,623 95		33,343 21
Board of Survey			230 74	138 93	
				$138 93	$68,942 45
4.3 Street Paving:					
Rebuilding streets			41,044 32	40,368 03	
Maintenance	$2,352 55		66,322 38	66,116 51	
	$2,352 55			$106,484 54	
4.4 Sidewalks:					
Paving — Edgestones and Sidewalks	490 66		25,000 00		24,999 95
Paving—Crossings and Repairs			10,000 00	9,997 85	
	$490 66			$9,997 85	$24,999 95
4.5 Street Lighting:					
Electrical Department — Street Lighting	35		74,000 00	74,249 64	
4.6 Street Cleaning:					
Street Cleaning Division (Less Snow Removal)			29,000 00	23,230 57	
4.7 Snow Removal:					
Street Cleaning			(Street Cleaning)	6,802 68	
4.8 Street Sprinkling:					
Street Watering	1,372 75		29,000 00	28,998 73	
4.9 Refuse Collection and Disposal:					
Overseers of Poor—House Offal	9,722 83		27,000 00	28,319 80	
Collection of Ashes			29,000 00	28,999 44	
	$9,722 83			$57,319 24	

SCHEDULE A–IV. — *Continued.*

4. PUBLIC WAYS AND WASTES. — Continued.

	Receipts.		Appropriations.	Expenditures.	
	Ordinary.	Extraordinary.		Ordinary.	Extraordinary.
4.10 Sewers and Sewage Disposal:					
Sewer Department — Construction		$86 00	$15,000 00		$7,509 72
Sewer Department — Improved Sewerage			68,845 51		61,997 27
Sewer Department — Maintenance	$68 15		17,500 00	$17,495 00	
Sewer Department — Permits	389 10				
Metropolitan Sewer Tax				78,252 17	
Dredging			3,000 00		
	$457 25	$86 00		$95,747 17	$69,506 99
4.11 Rivers, Harbors and Waterways:					
4.12 Bridges:					
Boston Bridges	402 50		17,000 00	16,928 10	
Cambridge Bridge			208,193 99		202,095 67
Harvard Bridge, Paving	3,131 26		26,131 26		25,841 97
Bridges — Street Department			3,500 00	3,500 00	
	$3,533 76			$20,428 10	$227,937 64
4.13 Miscellaneous:					
Damages to persons and personal property			Contingent	3,256 72	
Civil Service Department			250 00	249 95	
				$3,506 67	
Total Public Ways and Wastes	$17,930 15	$86 00		$441,130 35	$391,387 03

SCHEDULE A–IV.—*Continued.*

5. PUBLIC INDUSTRIES AND INVESTMENTS.

	Receipts.		Appropriations.	Expenditures.	
	Ordinary.	Extraordinary.		Ordinary.	Extraordinary.
5.1 Water Works:					
Construction—General	.....	$749 50	$23,000 00	.....	$22,946 74
" Fresh Pond	.....	.....	10,000 00	.....	*9,996 85
Maintenance	.....	.....	66,700 00	$63,960 34	.....
Rates	$331,396 80	.....	.....	.....	.....
Miscellaneous	5,285 31	.....	.....	.....	.....
Refunds and Abatements	.....	.....	7,000 00	6,985 63	.....
	$336,682 11	$749 50		$70,945 97	$32,943 59
5.2 Gas Works:					
5.3 Electric Light and Power Plants:					
5.4 Municipal Heating Plants:					
5.5 Municipal Street Railways:					
5.6 Transit Subways					
5.7 Subways for Pipes and Wires:					
5.8 Markets:					
5.9 Docks and Wharves					
5.10 City Real Estate:					
Rent of Land	208 30				
" Old Schoolhouse	85 00				
	$293 30				
5.11 Stocks, Bonds and Investments:					
5.12 Other Investments:					
5.13 Miscellaneous:					
Total Public Industries and Investments	$336,975 41	$749 50		$70,945 97	$32,943 59

* An Extraordinary expenditure from Ordinary income.

SCHEDULE A–IV.— *Continued.*

6. PUBLIC EDUCATION.

	Receipts.		Appropriations.	Expenditures.	
	Ordinary.	Extraordinary.		Ordinary.	Extraordinary.
6.1 Schools:					
Tuition, etc.	$8,030 81				
Salaries: Janitors and others			$34,000 00	$33,881 88	
General Expenses	110 75		37,000 00	31,245 09	
Land for Schoolhouse, Elm St.		$258 10	11,258 10		$11,257 75
New Schoolhouse, Ward 1			20,980 89		3,275 59
New Schoolhouse, Ward 2			79,923 80		18,958 66
Sanitary Arrangements			6,408 47	557 81	
Care of Truants			1,800 00	1,847 10	
Flags			100 00	99 15	
Incidentals			1,500 00	1,554 35	
Salaries			350,000 00	349,986 25	
Text Books and Supplies	516 50		17,000 00	19,220 94	
Transportation			300 00	300 00	
Vacation Schools			2,000 00	1,016 97	
	$8,658 06	$258 10		$439,709 54	$33,492 00
6.2 Libraries:					
Main Library			18,000 00	17,992 70	
East Cambridge Branch			1,350 00	1,346 83	
Library Addition			29,696 60		28,337 22
Fines	573 17				
	$573 17			$19,339 53	$28,337 22
6.3 Other Education					
6.4 Miscellaneous:					
Total Public Education	$9,231 23	$258 10		$459,049 07	$61,829 22

SCHEDULE A–IV.—*Continued.*

7. PUBLIC ART AND RECREATION.

	Receipts.		Appropriations.	Expenditures.	
	Ordinary.	Extraordinary.		Ordinary.	Extraordinary.
7.1 Museums and Art Galleries:					
7.2 Parks:					
Metropolitan Park Tax				$96,478 96	
Construction Account	$1,024 40		$56,322 89		$55,528 94
Commons, Squares and Public Grounds			5,600 00	5,045 53	
Cambridge Field and Shelter			4,500 00	5,111 97	
General Account	114 81		400 00	399 28	
Sections A. B. D. F. and Rindge Field			2,500 00	2,434 20	
Brown Tail Moth Extermination			3,000 00	4,799 06	
Section G			3,000 00	2,941 47	
Shade Trees			5,500 00	6,210 56	
	$1,139 21			$123,421 03	$55,528 94
7.3 Baths:					
Park Department	$64 94		2,500 00	2,291 98	
7.4 Celebrations:					
Memorial Day			Contingent	1,100 00	
Ringing Bells			Contingent	75 00	
				$1,175 00	
7.5 Miscellaneous:					
Charles Sumner Statue			Contingen	185 58	
Total Public Art and Recreation	$2,004 15			$127,073 59	$55,528 94

SCHEDULE A–IV.—*Continued.*

8. PUBLIC INDEBTEDNESS. (Transactions during the Year.)

	Receipts.		Appropriations.	Expenditures.	
	Ordinary.	Extraordinary.		Ordinary.	Extraordinary.
8.1 Receipts from Loans, not including temporary tax loans:					
Cambridge Bridge		$100,000 00			
City		58,000 00			
Hospital		6,000 00			
Parks		48,000 00			
Schoolhouse		97,500 00			
Sewer		20,000 00			
Street		44,000 00			
Metropolitan Park Assessment		46,000 00			
Water		18,500 00			
		$438,000 00			
8.2 Payments to Sinking Funds:					
Park Department			$22,541 67	$22,541 67	
Cambridge Bridge			4,666 67	4,666 67	
Clay Lands			5,335 00	5,335 00	
General			111,050 99	111,050 99	
Harvard Bridge			9,500 00	9,500 00	
Improved Sewerage			5,747 50	5,747 50	
Water Works			123,000 29	123,000 29	
				$281,842 12	
8.3 Direct Payment of Matured Debt: (Not from sinking funds but from tax levy direct.)					
8.4 Floating Debt Transactions.					
Excess of temporary loans issued		20,000 00			
8.5 Miscellaneous:					
Premium Account	$16,721 25				
Premium Account, Water	724 65				
	$17,445 90				
Total transactions concerning Public Debt	$17,445 90	$458,000 00		$281,842 12	

SCHEDULE A–IV.—*Continued.*

9. PUBLIC INTEREST.

	Receipts.		Appropriations.	Expenditures.	
	Ordinary.	Extraordinary.		Ordinary.	Extraordinary.
9.1 Interest upon Funds on Deposit:					
Interest on Bank Deposits	$3,188 67				
9.2 Interest upon Delinquent Taxes, etc.:					
Interest on Sewer Assessments	77 18				
Interest on Sidewalk Assess'ts	41 33				
Interest on Overdue Taxes	8,424 62				
	$8,543 13				
9.3 Payment of Interest upon Debt:					
Upon Funded Debt			$169,469 00	154,769 00	
Upon Temporary Tax Loans.				8,337 76	
Upon Park Loans			49,000 00	49,880 00	
Upon Water Loans			132,739 00	129,579 00	
				$342,565 76	
9.4 Miscellaneous Interest					
Interest on Trust Funds				1,500 00	
Accrued Interest	528 50				
Total Interest	$12,260 30			$344,065 76	

SCHEDULE A–IV.—*Continued.*

10. TAXATION.

	Receipts.		Appropriations.	Expenditures.	
	Ordinary.	Extraordinary.		Ordinary.	Extraordinary.
10.1 Real Property Taxes:					
Taxes, 1902	$1,454,478 96				
Other Years	321,166 74				
*Abatements, etc			$30,000 00	$33,047 28	
*Refund of Excess Taxes			Contingent	128 12	
	$1,775,645 70			$33,175 40	
10.2 Personal Property Taxes:					
(Taxes on Personal Property included in 10.1)					
10.3 Poll Taxes:					
(Included in 10.1)					
10.4 Other Taxes (except Franchise taxes):					
Corporation Tax	82,070 84				
Bank Tax	17,331 54			7,802 80	
10.5 Liquor Licenses:					
Contingent Fund	57 00		Contingent	14 25	
10.6 Other Licenses:†					
Milk Licenses	145 50				
Minors' Licenses	213 15				
Dogs	4,635 43				
Plumbers	33 00				
Hawkers and Pedlers	175 00				
	$5,202 08				
10.7 Franchise Taxes (Ordinary):					
Street Railway Tax	69,747 61			466 63	
10.8 Franchise Rights (Extraordinary):					
10.9 Miscellaneous:					
Contingent Fund — Old Taxes	34 00				
Lien Account Tax	7,005 00			3,523 60	
State, County and Armory Tax				152,159 32	
	$7,039 00			$155,682 92	
Total Taxation	$1,957,093 77			$197,142 00	

* Abatements and Refunds will hereafter be scheduled under Temporary Accounts, A–VI.

† Small items included in City Clerk's income which hereafter will be scheduled here.

SCHEDULE A–IV.—*Continued.*

11. SPECIAL ASSESSMENTS.

	Cash Receipts.		Appropriations.	Cash Expenditures.*	
	Ordinary.	Extraordinary.		Ordinary.	Extraordinary.
11.1 Assessments for Laying Out, Opening and Widening Streets:					
Betterments—Streets	.....	$1,111 15	.....	.....	.....
11.2 Assessments for Paving Streets	.....	9,965 45	.....	.....	.....
11.3 Assessments for Sidewalks:					
11.4 Assessments for Street Cleaning:					
11.5 Assessments for Street Sprinkling	$16,422 80	.....	.....	.....	.....
11.6 Assessments for Street Lighting:					
11.7 Assessments for Garbage Collection, etc.:					
11.8 Assessments for Sewers	.....	5,238 39	.....	.....	.....
11.9 Assessments for Parks	.....	2,905 62	.....	.....	.....
11.10 Other Special Assessments:					
Total Special Assessments	$16,422 80	$19,220 61			

* Expenditures are included in "Streets," etc., under Nos. 4.1, 4.2, etc.

SCHEDULE A–IV.—*Concluded.*

12. UNCLASSIFIED.

(Not included elsewhere.)

	Receipts.		Appropriations.	Expenditures.	
	Ordinary.	Extraordinary.		Ordinary.	Extraordinary.
12.1 Contingent Fund*	.....	.....	$20,000 00	.....	.....
Contingent Fund—Sundries	.....	.....	.....	$10 98	.....
Total Unclassified	.....	.....	.....	$10 98	.....
GRAND TOTALS OF SCHEDULE A–IV	$2,427,263 10	$488,788 82	$2,803,402 07	$2,449,487 79	$543,139 30

* Expenditures shown in detail upon previous sheets, and appropriation entered here.

SCHEDULE A–v.

TRUST FUNDS, ETC.

Capital Account Transactions.

Funds.	Receipts.	Expenditures.
Cemetery Fund	$3,661 50	$3,661 50

Income Account Transactions: None.

Grand Total Income and Capital Transactions of Trust Funds, Etc., (per Schedule A–II.)	$3,661 50	$3,661 50

SCHEDULE A–VI.

TEMPORARY ACCOUNTS.

	Receipts.	Expenditures.
1. Temporary Tax Loans	$500,000 00	$500,000 00
2. Transfers		
3. Payments from Sinking Funds into Treasury and from Treasury to Redeem Matured Bonds	145,000 00	145,000 00
4. Rebates and Refunds*		
Total Temporary Accounts (per Schedule A–II.)	$645,000 00	$645,000 00

* Included this year under 5.1, 10.1, etc.

SCHEDULE A–VII.

A Tabulated Budgetary Statement of the Finances of all the Departments.

Departments.	No. in Schedule A–IV.	Credits.				Debits.	Balances and Transfers.				
		Revenue of the year carried to the credit of the Dept	Appropriation by the City Council.	Additional appropriations (if any).	Total credits (not including transfers).	Expenditures of the year.	Surplus of credits.	Deficiency of credits.	Transfers from this Dept. (charges).	Transfers to this Dept. (credits).	Amount carried to General Treasury.
General Government.											
Mayor's Department	1.1										
Salaries and Clerical Assistance			$4,864 00		$4,864 00	$4,864 00					
Other Expenses			536 00		536 00	524 00	$12 00				$12 00
Councils	1.2										
City Messenger, Salaries			2,400 00		2,400 00	1,733 31	666 69		$650 00		16 69
" " Other Expenses			300 00		300 00	297 14	2 86				2 86
(See No. 1.7 for Postage & Stationery)											
Clerk of Committees, Salaries			3,600 00		3,600 00	3,600 00					
" " Other Expenses			400 00		400 00	399 02	98				98
City Council Expenses			Contingent			3,704 75				$3,704 75	
City Clerk, Salaries and Clerical Ass't			5,875 00		5,875 00	6,007 06		$132 06		150 00	17 94
" " Other Expenses			1,711 00		1,711 00	1,559 69	151 31		150 00		1 31
Law Department	1.3										
Salaries			4,300 00		4,300 00	4,347 50		47 50		50 00	2 50
Expenses			700 00		700 00	698 51	1 49				1 49
Finance	1.4										
Auditing, Salaries			3,200 00		3,200 00	3,273 65		73 65		100 00	26 35
" Expenses			500 00		500 00	500 00					
Assessors, Salaries			11,800 00		11,800 00	12,170 95		370 95	360 00	750 00	19 05
" Expenses			1,200 00		1,200 00	1,259 56		59 56		60 00	44
" Plans, Engineering Dept			300 00		300 00	229 35	70 65				70 65
Treasury, Salaries			10,250 00		10,250 00	10,359 33		109 33		125 00	15 67
" Expenses			5,250 00		5,250 00	5,019 52	230 48		125 00		105 48
Sinking Funds Officials			Contingent			405 00				405 00	
Elections	1.5										
Election, City Clerk			5,700 00		5,700 00	6,224 92		524 92		525 00	08
" Registrars			3,500 00		3,500 00	3,162 95	337 05			400 00	737 05
" Supt. Public Buildings,			2,250 00		2,250 00	3,288 68		1,038 68		1,100 00	61 32
Voting Booth, Public Property Dept			400 00		400 00	395 00	5 00				5 00
Notifying Voters			Contingent			183 50				183 50	
City Buildings	1.6										
Public Property, City Bldg., Salaries			9,500 00		9,500 00	10,699 90		1,199 90		1,200 00	10
" " " " Expenses.			7,500 00		7,500 00	6,628 79	871 21		1,100 00	250 00	21 21
(See also Nos. 1.5, 2.6, 2.7, 6.1)											

SCHEDULE A–VII. — *Continued.*

Departments.	No. in Schedule A-IV.	Credits.				Debits.	Balances and Transfers.				
		Revenue of the year carried to the credit of the Dept	Appropriation by the City Council.	Additional appropriations (if any).	Total credits (not including transfers).	Expenditures of the year.	Surplus of credits.	Deficiency of credits.	Transfers from this Dept. (charges).	Transfers to this Dept. (credits.)	Amount carried to General Treasury.
Miscellaneous	1.7										
Postage and Stationery, Messenger			$1,200 00		$1,200 00	$1,192 09	$7 91				$7 91
Inauguration Day			Contingent			30 00				$30 00	
Prince Henry Reception			Contingent			283 06				283 06	
Gray Hearing			Contingent			3,685 72				3,685 72	
Searching Records			Contingent			8 00				8 00	
Protection of Life, Health and Property.											
Police Department	2.1										
Salaries and Clerical Assistance			124,000 00		124,000 00	125,336 19		$1,336 19		1,350 00	13 81
Expenses			5,000 00		5,000 00	5,915 51		915 51		950 00	34 49
Fire Department	2.2										
Salaries			78,300 00		78,300 00	77,554 51	745 49		$350 00		395 49
Expenses			15,200 00		15,200 00	15,529 27		329 27		350 00	20 73
Fire and Police Telegraph	2.2a										
Electrical Dept., Wire Account, Salaries			7,000 00		7,000 00	7,079 50		79 50		80 00	50
" " Expenses			3,000 00		3,000 00	2,919 21	80 79		80 00		79
Health Department	2.4										
Salaries			12,000 00		12,000 00	11,944 78	55 22				55 22
Land for Hospital			6,500 00		6,500 00		6,500 00				6,500 00
Small-pox Hospital			9,000 00	$37,600 00	46,600 00	47,007 68		407 68		500 00	92 32
Temporary Hospital			10,000 00		10,000 00	9,999 58	42				42
Other Expenses			5,000 00		5,000 00	4,989 03	10 97				10 97
Inspector Milk and Vinegar, Salaries			1,360 00		1,360 00	1,343 31	16 69		12 00		4 69
" " " Expenses			320 00		320 00	330 97		10 97		12 00	1 03
Inspector of Provisions			800 00		800 00	777 00	23 00				23 00
Cemeteries and Crematories	2.5										
Cemetery Department, Salaries			15,000 00		15,000 00	15,008 22		8 22	300 00	400 00	91 78
" " Filling Low Lands			1,055 73		1,055 73	1,055 52	21				21
" " Other Expenses			2,000 00		2,000 00	2,442 71		442 71		500 00	57 29
Inspectors	2.6										
Public Property, Incidentals, Salaries			5,500 00		5,500 00	5,500 00					
" " " Other Expenses			900 00		900 00	891 99	8 01				8 01
Plumbers' Examination Dept			100 00		100 00		100 00				100 00

Inspectors—*Continued.*											
Sealers of Weights and Measures, Salaries			1,850 00		1,850 00	1,787 25	62 75		60 00		2 75
Sealers of Weights and Measures, Expenses			650 00		650 00	984 97		334 97		335 00	03
Milltia and Armories	2.7										
Public Property, Armory, Beech Street			300 00		300 00	61 00	239 00				239 00
" " Rifle Range			400 00		400 00	341 28	58 72				58 72
Car Tickets			Contingent			223 24				223 24	
Public Charity and Correction.											
Almshouses	3.4										
Overseers of Poor, Farm, Labor			4,200 00		4,200 00	4,574 23		374 23		390 00	15 77
" " " Supplies			800 00		800 00	692 67	107 33		100 00		7 33
" " City Home, Salaries			7,500 00		7,500 00	7,466 77	33 23				33 23
" " " Expenses			11,500 00		11,500 00	11,494 28	5 72				5 72
(House Offal, See No. 4.9)											
Out-door Relief	3.5										
Outside Aid, Salaries			3,600 00		3,600 00	3,684 25		84 25		100 00	15 75
" Expenses (including care of Insane)			46,400 00		46,400 00	39,015 36	7,384 64		7,100 00		284 64
City Physician			1,500 00		1,500 00	1,500 00					
Miscellaneous	3.9										
State Aid			25,500 00		25,500 00	25,493 24	6 76				6 76
Public Ways and Wastes.											
Administration	4.1										
Engineering Department, Salaries			9,900 00		9,900 00	9,251 96	648 04				648 04
" " Expenses			900 00		900 00	776 02	123 98				123 98
(Assessor's Plans, see No. 1.4)											
Street Department, Salaries, Supt., etc.			4,000 00		4,000 00	4,198 25		198 25		200 00	1 75
Opening, Grading and Widening Streets	4.2										
Land Damages			35,497 32	7,000 00	42,497 32	35,599 24	6,898 08				6,898 08
Construction, Belmont St			1,235 14		1,235 14	1,232 53	2 61				2 61
Dudley St			3,500 00		3,500 00	3,499 84	16				16
Granite St			3,191 31		3,191 31	386 56	2,804 75		2,800 00		4 75
Munroe St			4,000 00		4,000 00	3,998 07	1 93				1 93
Pleasant St			2,347 50		2,347 50	2,347 50					
Reed St			8,000 00		8,000 00	3,996 93	4,003 07		4,000 00		3 07
Sherman St			9,500 00		9,500 00	9,496 90	3 10				3 10
Sundry Sts., Wards 6 and 7			3,250 00		3,250 00	3,245 15	4 85				4 85
" " Ward 11			4,000 00		4,000 00	3,989 91	10 09				10 09
Wright St			1,600 00		1,600 00	1,149 82	450 18		450 00		18
Board of Survey			230 74		230 74	138 93	91 81				91 81
Street Paving	4.3										
Rebuilding Streets, Bridge St.			2,044 32	7,000 00	9,044 32	7,030 98	2,013 34		2,013 32		02
Broadway			2,000 00		2,000 00	4,181 31		2,181 31	198 20	2,379 51	
Brookline St			10,000 00		10,000 00	9,993 98	6 02				6 02
Cambridge St			5,000 00		5,000 00	4,164 73	835 27		835 27		
Franklin St			5,000 00		5,000 00	4,997 03	2 97				2 97
River St			10,000 00		10,000 00	10,000 00					

SCHEDULE A–VII.— *Continued.*

Departments.	No. in Schedule A–IV.	Credits.				Debits.	Balances and Transfers.				
		Revenue of the year carried to the credit of the Dept	Appropriation by the City Council.	Additional appropriations (if any).	Total credits (not including transfers).	Expenditures of the year.	Surplus of credits.	Deficiency of credits.	Transfers from this Dept. (charges).	Transfers to this Dept. (credits).	Amount carried to General Treasury.
Street Paving — *Continued.*											
Macadamizing, Resurfacing and Repairing Streets, and General Expense			$66,322 38		$66,322 38	$66,116 51	$205 87		$200 00		$5 87
Sidewalks	4.4										
Edgestones and Sidewalks			25,000 00		25,000 00	24,999 95	05				05
Crossings and Repairs			10,000 00		10,000 00	9,997 85	2 15				2 15
Street Lighting	4.5										
Electric Department, Salaries			1,000 00		1,000 00	1,000 00					
" " Expenses			73,000 00		73,000 00	73,249 64		$249 64		$310 00	60 36
Street Cleaning	4.6										
Cleaning sts., (including snow removal)			29,000 00		29,000 00	30,033 25		1,033 25		1,033 47	22
Street Sprinkling	4.8										
Watering Streets			29,000 00		29,000 00	28,998 73	1 27				1 27
Refuse Collection and Disposal	4.9										
Overseers of Poor, House Offal, Labor			22,500 00		22,500 00	23,179 50		679 50		680 00	50
" " " Expenses			4,500 00		4,500 00	5,140 30		640 30		655 00	14 70
Street Department, Collection of Ashes			29,000 00		29,000 00	28,999 44	56				56
Sewers and Sewage Disposal	4.10										
Sewer Dept., Construction, General			15,000 00		15,000 00	7,509 72	7,490 28				7,490 28
" " Improved Sewerage			48,845 51	$20,000 00	68,845 51	61,997 27	6,848 24				6,848 24
" " Maintenance, General			17,500 00		17,500 00	17,495 00	5 00				5 00
" " Dredging			3,000 00		3,000 00		3,000 00				3,000 00
Bridges	4.12										
Bridge Dept., Salaries and Labor			9,700 00		9,700 00	10,002 76		302 76		350 00	47 24
" " Expenses			7,300 00		7,300 00	6,925 34	374 66		350 00		24 66
" " Cambridge Bridge			108,193 99	100,000 00	208,193 99	202,095 67	6,098 32				6,098 32
" " Paving Harvard Bridge			23,000 00	3,131 26	26,131 26	25,841 97	289 29				289 29
Street "			3,500 00		3,500 00	3,500 00					
Miscellaneous	4.13										
Damages to Persons and Property			Contingent			3,256 72				3,256 72	
Civil Service Department			250 00		250 00	249 95	05				05
Public Industries and Investments.											
Water Works	5.1										
Construction, General			12,000 00	5,000 00	17,000 00	16,999 14	86				86
Fresh Pond			10,000 00		10,000 00	9,996 85	3 15				3 15

Water Works—*Continued.*											
Hobbs Brook Account:											
General			3,500 00		3,500 00	3,482 83	17 17				17 17
Land Settlements			2,000 00		2,000 00	1,964 77	35 23				35 23
Services of City Solicitor			500 00		500 00	500 00					
Maintenance:											
General			26,800 00		26,800 00	24,485 92	2,314 08		1,914 00		400 08
Rent			1,200 00		1,200 00	1,200 00					
Office Expenses:											
Salaries			5,000 00		5,000 00	5,435 00		435 00		450 00	15 00
Other Expenses			500 00		500 00	418 50	81 50				81 50
Pumping			15,000 00		15,000 00	16,200 00		1,200 00		1,200 00	
Payson Park			831 00		831 00	830 32	68				68
Hobbs Brook			1,500 00		1,500 00	1,499 01	99				99
Fresh Pond			8,000 00		8,000 00	8,232 79		232 79		233 00	21
Stony Brook			3,369 00		3,369 00	2,842 10	526 90				526 90
Supplies			4,000 00		4,000 00	2,355 23	1,644 77				1,644 77
Ice for Fountains			500 00		500 00	461 47	38 53				38 53
Rates, fines and abatements			4,000 00		4,000 00	3,985 63	14 37				14 37
Refunds			3,000 00		3,000 00	3,000 00					
(See also No. 8.2 and 9.3.)											
Public Education.											
Schools	6.1										
Schoolhouses:											
Salaries			34,000 00		34,000 00	33,881 88	118 12				118 12
Expenses			37,000 00		37,000 00	31,245 09	5,754 91				5,754 91
Land for Schoolhouse, Elm St			11,000 00	258 10	11,258 10	11,257 75	35				35
New Schoolhouse, Ward One			20,980 89		20,980 89	3,275 59	17,705 30			5,850 66	23,555 96
" " Ward Two			79,923 80		79,923 80	18,958 66	60,965 14				60,965 14
Sanitary Arrangements			6,408 47		6,408 47	557 81	5,850 66		5,850 66		
Care of Truants			1,800 00		1,800 00	1,847 10		47 10		50 00	2 90
Flags			100 00		100 00	99 15	85				85
Incidentals			1,500 00		1,500 00	1,554 35		54 35		275 00	220 65
Salaries			350,000 00		350,000 00	349,986 25	13 75				13 75
Text Books and Supplies			17,000 00		17,000 00	19,220 94		2,220 94		2,350 00	129 06
Transportation of Pupils			300 00		300 00	300 00			200 00	200 00	
Vacation Schools			2,000 00		2,000 00	1,016 97	983 03		980 00		3 03
Libraries	6.2										
Main Library:											
Salaries			9,500 00		9,500 00	9,544 01		44 01		50 00	5 99
Expenses			8,500 00		8,500 00	8,448 69	51 31		50 00		1 31
East Cambridge Branch:											
Salaries			930 00		930 00	927 66	2 34				2 34
Expenses			420 00		420 00	419 17	83				83
Addition			29,696 60		29,696 60	28,337 22	1,359 38				1,359 38

SCHEDULE A–VII.—*Concluded.*

Departments.	No. in Schedule A–IV.	Credits.				Debits.	Balances and Transfers.				
		Revenue of the year carried to the credit of the Dept	Appropriation by the City Council.	Additional appropriations (if any).	Total credits (not including transfers).	Expenditures of the year.	Surplus of credits.	Deficiency of credits.	Transfers from this Dept. (charges)	Transfers to this Dept. (credits).	Amount carried to General Treasury.
Public Art and Recreation.											
Parks	7.2										
Construction and Lands			$56,322 89		$56,322 89	$55,528 94	$793 95				$793 95
Maintenance:											
Brown Tail Moth Extermination			3,000 00		3,000 00	4,799 06		$1,799 06		$1,800 00	94
Commons, Sqs. & Pub. Grounds			5,600 00		5,600 00	5,045 53	554 47		$550 00		4 47
Cambridge Field and Shelter			4,500 00		4,500 00	5,111 97		611 97		650 00	38 03
General Account			400 00		400 00	399 28	72				72
Sections A, B, D, F, & Rindge Fd.			2,500 00		2,500 00	2,434 20	65 80				65 80
Section G			3,000 00		3,000 00	2,941 47	58 53				58 53
Shade Trees			5,500 00		5,500 00	6,210 56		710 56		750 00	39 44
(See also No. 8.2 and 9.3.)											
Baths	7.3										
Park Department			2,500 00		2,500 00	2,291 98	208 02		200 00		8 02
Celebrations:	7.4										
Memorial Day			Contingent			1,100 00				1,100 00	
Ringing Bells			Contingent			75 00				75 00	
Miscellaneous	7.5										
Charles Sumner Statue			Contingent			185 58				185 58	
Public Indebtedness.											
(Transactions during the year.)											
Sinking Funds	8.2										
Park Department			22,541 67		22,541 67	22,541 67					
Cambridge Bridge			4,666 67		4,666 67	4,666 67					
Clay Lands			5,335 00		5,335 00	5,335 00					
General			111,050 99		111,050 99	111,050 99					
Harvard Bridge			9,500 00		9,500 00	9,500 00					
Improved Sewerage			5,747 50		5,747 50	5,747 50					
Water Works			123,000 29		123,000 29	123,000 29					
Public Interest.											
Payment of Interest on Debt, etc	9.3 9.4										
City			169,469 00		169,469 00	164,606 76	4,862 24		4,000 00		862 24
Park			49,000 00		49,000 00	49,880 00		880 00		1,000 00	120 00
Water			132,739 00		132,739 00	129,579 00	3,160 00				3,160 00

Taxation.											
Real Property Taxes	10.1										
Abatements, etc.			30,000 00		30,000 00	33,047 28		3,047 28		3,300 00	252 72
Refunds, etc.			Contingent			128 12				128 12	
Liquor Licenses	10.4										
Commonwealth of Massachusetts			Contingent			14 25				14 25	
Unclassified.											
Contingent Fund	12.1		20,000 00			10 98	19,989 02		18,662 94		1,326 08

SCHEDUDE A–VIII.

APPROPRIATIONS AND EXPENDITURES

THE AMOUNT OF THE SEVERAL APPROPRIATIONS MADE BY THE CITY COUNCIL DURING THE YEAR—THE TRANSFERS FROM ONE APPROPRIATION TO ANOTHER—THE EXPENDITURES IN DETAIL UNDER EACH APPROPRIATION, AND THE UNEXPENDED BALANCES NOVEMBER 30, 1902.

NOTE.

Schedule A–VIII., which should follow in order, is designed to set forth in detail the expenditures of each department of the City.

In the present report, however, it has been found impracticable to give A–VIII. exactly in the standard form for the reason that the schedules of department details, as given in the Auditor's previous annual reports, had already been prepared before the change in the form of this report was decided on. By reason of the limited time at the disposal of the accountants it has been possible only to partly rearrange these schedules and insert them in place of the standard A–VIII.

They remain in alphabetical arrangement instead of the standard arrangement illustrated by Schedule A–VII.

The other modifications which have been made are sufficient, however, to bring these schedules into close conformity with the standard, so that the purpose of Schedule A–VIII. is reasonably well shown this year. In future reports the standard form should be followed exactly.

The numbers placed in parenthesis opposite the various titles indicate the location of the corresponding totals in Schedule A–IV.

SCHEDULE A–VIII.

(See preceding note.)

APPROPRIATIONS AND EXPENDITURES

ABATEMENTS, TAXES. (10.1)*

Appropriation			$30,000 00
EXPENDED			
For Abatements on taxes, as per Assessors' certificates		$30,068 58	
Excess of taxes, 1901, over taxes, 1896 :—			
Horace O. Bright	$332 07		
Benj. F. Brown	128 12		
Cambridgeport Savings Bank	163 30		
Geo. G. Crocker et als. Trs.	1,324 80		
Edw., Geo. F. and J. H. Kendall	308 63		
Geo. B. Roberts	231 07		
Heirs of Benj. Tilton	131 42		
Wm. H. Wood	241 30		
		2,860 71	
Costs of calling in invalid tax titles :—			
Est. of Wm. H. Connors, et al	$9 73		
Geo. A. Richards, et al	16 45		
Harlow H. Rogers	23 92		
Willard Welsh	67 89		
		117 99	
Total			33.047 28
Excess of Expenditures over Appropriation			$3,047 28
Transfers to this Department :—			
From Assesor's Department, salaries		$300 00	
" Interest		3,000 00	
			3,300 00
Balance relinquished to General Treasury			$252 72

ASSESSORS' DEPARTMENT. (1.4)

SALARIES AND CLERICAL ASSISTANCE.

Appropriation			$11,800 00
EXPENDED.			
For salaries of Assessors : —			
John M. Davis	$2,000 00		
Joshua G. Gooch	2,000 00		
Andrew J. Green	166 67		
D. B. Shaughnessy	1,833 33		
		$6,000 00	
Assistant Assessors : —			
Manuel Andrew	$146 00		
Bernard J. Brogan	146 00		
Amounts carried forward	$292 00	$6,000 00	$11,800 00

* Reference to location of totals in Schedule A–IV., viz.: (10.1) refers to title 1, "Real Property Taxes," under general heading 10, "Taxation."

ASSESSORS' DEPT., SALARIES AND CLERICAL ASSISTANCE — Continued.

Amounts brought forward	$292 00	$6,000 00	$11,800 00
For Lyman W. Brooks	130 00		
Thos F. Cosgrove	110 00		
John F Doherty	105 00		
Thos. Gallagher, 2nd	146 00		
Warren Ivers	8 00		
James E. Lennon	10 00		
Wm. J. McNamara	112 00		
Geo. P. O'Brien	94 00		
Wm. T. Phelan	128 00		
Jos. A. Ryan	114 00		
P. J. White	150 00		
		1,399 00	
Clerks: —			
Carrie A. Estes	$780 00		
Kittie L. Magoun	780 00		
Jessie I. R. Waterman	780 00		
Temporary clerks	2,431 95		
		4,771 95	
Total			12 170 95
Excess of Expenditures over Appropriation			$370 95
Transfer to this Department from Contingent Fund			750 00
			$379 05
Transfers from this Department: —			
To General Expenses		$60 00	
To Abatements, Taxes		300 00	
			360 00
Balance relinquished to General Treasury			$19 05

GENERAL EXPENSES.

Appropriation			$1,200 00
EXPENDED.			
For Abstracts, Horace J. Stevens		$75 00	
Advertising, Press Newspaper Co.		14 20	
Carriage hire: —			
Irving Blake	$2 25		
Chas W. Dailey	3 00		
		5 25	
Car tickets: —			
Boston Elevated Railway Co.		30 00	
Directories: —			
E. F. Hunt & Co	$3 00		
Sampson, Murdock & Co.	6 00		
		9 00	
"Revised Laws," Commonwealth of Massachusetts		6 00	
Stationery printing, etc: —			
Cambridge Chronicle Co.	$663 75		
City Messenger Department	103 35		
Amounts carried forward	$767 10	$139 45	$1,200 00

ASSESSORS' DEPARTMENT, GENERAL EXPENSES — Concluded.

Amounts brought forward . .	$767 10	$139 45	$1,200 00
For Cotton & Gould	250 43		
J. Frank Facey	23 50		
E. W. S. Jones	35 75		
		1,076 78	
Subscriptions, Review & Record Co.		5 00	
Sundries		2 90	
Telephone rent and tolls . . .		35 43	
Total			1,259 56
Excess of Expenditures over Appropriation . .			59 56
Transfers to this Department from Assessors Department:—Salaries			60 00
Balance relinquished to General Treasury . . .			44

AUDITING DEPARTMENT. (1.4)

SALARIES AND CLERICAL ASSISTANCE.

Appropriation			$3,200 00
EXPENDED			
For salaries of:—			
City Auditor, Harry T. Upham .		$2,100 00	
Clerks, Esther L Cogan . .		780 00	
Temporary clerks		393 65	
			3,273 65
Excess of Expenditures over Appropriation . .			73 65
Transfer to this Department from Contingent Fund .			100 00
Balance relinquished to General Treasury . . .			$26 35

GENERAL EXPENSES.

Appropriation			$500 00
EXPENDED			
For cleaning safe		$6 00	
Directory, E. F. Hunt & Co. . .		3 00	
Files, Art Metal Construction Co. .		66 25	
Official bond, Wm. A. Muller . .		40 00	
Repairing numbering machine:—			
Thomas A. Upham		5 00	
Stationery, printing, etc.:—			
City Messenger Department . .	$15 84		
Cotton & Gould	31 32		
J. A. Cummings Printing Co. .	45 06		
J. Frank Facey	73 00		
E. F. Hunt & Co.. . . .	7 50		
The Cambridge Times . . .	58 25		
Amounts carried forward . . .	$230 97	$120 25	$500 00

AUDITING DEPARTMENT, GENERAL EXPENSES — Concluded.

Amounts brought forward . .	$230 97	$120 25	$500 00
For The Co-operative Press . . .	6 00		
Thorp & Martin Co. . . .	89 80		
John Wilson & Son	33 00		
		359 77	
Subscriptions		3 00	
Sundries		6 98	
Telephone rent		10 00	
Total			$500 00

BOARD OF SURVEY. (4.2)

Appropriation	$230 74

EXPENDED.

For Advertising and printing: —			
The Cambridge Chronicle Co. .	$9 50		
The Cambridge Democrat . .	8 00		
The Cambridge Times . . .	8 00		
The Cambridge Tribune . . .	8 25		
The Press Newspaper Co. . .	23 25		
		$57 00	
Car tickets: —			
Boston Elevated Railway Co. .		15 00	
Cash expended for traveling expenses: —			
Edwin D. Mellen		10 00	
Clerical services, John McDuffie .		33 33	
Stationery and printing: —			
City Messenger Department . .	$4 00		
J. A. Cummings Printing Co. .	7 60		
		11 60	
Typewriting, Annie E. Conley . .		12 00	
Total			138 93
Surplus of Appropriation relinquished to General Treasury			$91 81

BRIDGE DEPARTMENT. (4.12)

SALARIES AND LABOR.

Appropriation	$9,700 00

EXPENDED.

For salaries of: —			
Bridge Commissioners and Harbor Master, Wm. J. Marvin . .	$800 00		
Clerk, Chas. S Parsons . . .	250 00		
Draw-tenders and Assistants .	8,952 76		
Total			10 002 76
Excess of Expenditures over Appropriation . .			302 76
Transfer to this Department from Contingent Fund .			350 00
Balance relinquished to General Treasury . . .			$47 24

BRIDGE DEPARTMENT — Continued.

GENERAL EXPENSES.

Appropriation			$7,300 00

DEPARTMENT RECEIPTS. CARRIED TO GENERAL TREASURY.

For rents, wharfage, etc.		$402 50	

EXPENDED.

For car tickets: —			
Boston Elevated Railway Co.		$50 00	
Fuel, Marston Coal Co.		61 79	
Stationery and printing: —			
City of Boston	$23 62		
Cotton & Gould	1 37		
J. L. Fairbanks & Co.	10 47		
		35 46	
Telephone rent and tolls		22 50	
Typewriting, A. R. Andrews		14 50	
			184 25
For Brookline Street Bridge: —			
Hardware and supplies: —			
Merrill, Dexter & Co.	$10 80		
Sundry persons	10 74		
		$21 54	
Heating apparatus repairs: —			
M. J. Sheehan		8 55	
Lighting: —			
Brookline Gas Light Co.	$127 75		
Cambridge Electric Light Co.	50 00		
		177 75	
Lumber: —			
C. E Dearborn	$93 36		
Wm. H. Wood & Co.	133 82		
		227 18	
Repairing bridges: —			
Miller & Shaw	$4 17		
John T. Scully & Bro.	152 75		
		156 92	
			591 94
For Craigie Bridge: —			
Cash expended for sundries, A. W. Smith		$10 79	
Fuel, Marston Coal Co.		116 11	
Hardware, tools and supplies: —			
L. A. Stingel	$45 57		
Sundry persons	20 55		
		66 12	
Insurance: —			
Cambridge Ins. Agency	$6 25		
A. M. Stewart & Co.	9 00		
		15 25	
Amounts carried forward		$208 27	$776 19 $7,300 00

BRIDGE DEPARTMENT, GENERAL EXPENSES — Continued.

Amounts brought forward . .	$208 27	$776 19	$7,300 00
For lighting: —			
Boston Electric Light Co. $10 37			
Cambridge Electric Light Co. 250 01			
The Edison Electric Illum. Co. 46 41			
	306 79		
Lumber: —			
John S. Clary Lumber Co. $229 15			
P. S Huckins & Co. . 5 84			
Geo. McQuesten Co. . 66 27			
John M. Woods & Co. . 12 05			
	313 31		
Paving, A A. Libby & Co. . .	56 31		
Plumbing, Edw. Moore & Co. .	21 35		
Repairing bridge: —			
Miller & Shaw . . $105 90			
John T. Scully & Bro. . 556 10			
H. J. Shaw . . . 52 77			
	714 77		
Salt, Eastern Salt Co. . . .	6 00		
Sprinkling bridge: —			
Street Department	31 00		
Use of Water: —			
Cambridge Water Works . .	10 61		
		1,668 41	
For Harvard Bridge: —			
Inspectors: —			
F A. Daunt . . . $15 75			
Timothy Fitzmaurice . 17 50			
Watchman, Edw. T. Hines 7 00			
	40 25		
Cash expended for labor and sundries, James A. Gorman	8 00		
Cleaning bridge: —			
Austin Ford & Son . . $10 00			
Thomas R. Ingraham . 37 13			
James P McSorley . 5 00			
Thos. O'Hara . . . 24 07			
	76 20		
Current to draw, Cambridge Electric Light Co.	150 00		
Electrical work: —			
F. Bryant & Co.	44 55		
Engineers' supplies: —			
P. Sutherland & Co. . . .	7 08		
Fuel, Marston Coal Co. . . .	13 58		
Globes, Union Glass Co. . . .	25 50		
Amounts carried forward . . .	$365 16	$2,444 60	$7,300 00

BRIDGE DEPARTMENT, GENERAL EXPENSES — Continued.

Amounts brought forward . .	$365 16	$2,444 60	$7,300 00
For Hardware, tools and supplies: —			
Brock & Eaton . . $5 28			
E. T. Bynner . . . 4 70			
Merrill, Dexter & Co. . 18 39			
Tyer Rubber Co. . . 5 25			
F. A. White . . . 8 75			
Sundry persons . . 16 64			
	59 01		
Ice, Boston Ice Co. . . .	6 00		
Insurance: —			
A. M. Stewart & Co. . . .	6 00		
Lighting: —			
Cambridge Electric Light Co. $630 00			
Edison Electric Illum. Co. 510 00			
	1,140 00		
Lumber and cement: —			
Wm. H Wood & Co. . . .	142 30		
Repairing bridge: —			
Miller & Shaw . . $19 38			
John T. Scully & Bro. . 77 07			
H. J. Shaw . . . 5 68			
	102 13		
Repairing fence and lamps: —			
Jos A. Reid	28 00		
Sheathing draw: —			
B. L. Randall	49 81		
		1,898 41	
For North Harvard Bridge: —			
Bedding: —			
J. H. Corcoran & Co. . . .	$5 64		
Hardware, tools, and supplies: —			
Brock & Eaton . . $43 46			
Merrill, Dexter & Co. . 9 25			
Sundry persons . . 5 40			
	58 11		
Lumber: —			
Wm. H. Wood & Co. . . .	233 65		
Repairing bridge: —			
Wm. Elliott & Co. . . $24 85			
Miller & Shaw . . 47 01			
John T. Scully & Bro. . 119 12			
	190 98		
		488 38	
For Prison Point Bridge: —			
Cash expended for Sundries, N. E. Story	$10 08		
Fuel, Marston Coal Co. . . .	23 70		
Amounts carried forward . . .	$33 78	$4,831 39	$7,300 00

BRIDGE DEPARTMENT, GENERAL EXPENSES — Continued.

Amounts brought forward . .	$33 78	$4,831 39	$7,300 00
For Hardware, tools and supplies: —			
Thos. J. Emery . . $36 03			
Geo. W. Hobbs . . 11 09			
Sundry persons . . 9 23			
	56 35		
Insurance, A. M. Stewart & Co. .	4 00		
Lumber: —			
P. S. Huckins & Co. . $12 05			
Geo. McQuesten Co. . 17 84			
E. D. Sawyer & Co. . 201 72			
	231 61		
Paving, A. A. Libby & Co. . .	13 48		
Repairing bridge: —			
John T. Scully & Bro. . $178 77			
H. J. Shaw . . . 30 47			
	209 24		
		548 46	
For River Street Bridge: —			
Hardware, tools and supplies: —			
Merrill, Dexter & Co. . $23 84			
Sundry persons . . 7 21			
	$31 05		
Lighting: —			
Cambridge Electric Light Co. .	49 99		
Lumber, Wm. H. Wood & Co. .	71 42		
Repairing bridge: —			
Miller & Shaw . . $12 57			
John T. Scully & Bro. . 72 88			
H. J. Shaw . . . 21 56			
	107 01		
		259 47	
For West Boston Bridge: —			
Cash expended for labor and sundries: —			
W. B. Hoitt	$10 00		
Cleaning bridge: —			
Austin Ford & Son	195 50		
Fuel, Marston Coal Co. . . .	8 55		
Hardware and Supplies: —			
Dodge, Haley & Co. . $30 32			
Sundry persons . . 7 35			
	37 67		
Lighting: —			
Boston Electric Light Co. $62 22			
Cambridge Electric Light Co. 250 03			
Edison Electric Illum. Co. 315 33			
	627 58		
Oil, Standard Oil Co.	5 17		
Salt, Eastern Salt Co. . . .	8 22		
		892 69	
Amounts carried forward . . .		$6,532 01	$7,300 00

BRIDGE DEPARTMENT, GENERAL EXPENSES — Concluded.

Amounts brought forward . .			$6,532 01	$7,300 00
For Western Ave. Bridge: —				
Hardware and supplies: —				
Brock Bros. . . .	$4 00			
F. A. White . . .	5 75			
		$9 75		
Lighting: —				
Cambridge Electric Light Co. .		50 00		
Lumber, Wm. H. Wood & Co. . .		115 50		
Repairing bridge: —				
Miller & Shaw . .	$1 44			
John T. Scully & Bro. .	193 20			
H. J. Shaw . . .	23 44			
		218 08		
			393 33	
Total			$6,925 34	

SUMMARY.

For General Expenses	$184 25	
Brookline Street Bridge . . .	591 94	
Craigie Bridge	1,668 41	
Harvard Bridge	1,898 41	
North Harvard Bridge . . .	488 38	
Prison Point Bridge	548 46	
River Street Bridge	259 47	
West Boston Bridge	892 69	
Western Avenue Bridge . . .	393 33	
		6,925 34
Surplus of Appropriation		$374 66
Transfer from this Department to Bridge Department, Salaries and Labor		350 00
Balance relinquished to General Treasury . . .		$24 66

CAMBRIDGE BRIDGE. (4.12)

Appropriation	$108,193 99
Additional Appropriation	100,000 00
	$208,193 99

EXPENDED.

For salaries of		
Commissioner, E. D. Leavitt . .	$1,250 00	
Chief Engineer, Wm. Jackson .	1,500 00	
Ass't Secretary, Edw. A. Counihan	83 34	
Assistant Engineers: —		
John E. Cheney	1,000 00	
L. F. Cutter	31 25	
F. H. Fay	177 50	
G. E. Harkness	722 00	
S. A. Jubb	665 10	
F. P. Spalding	21 00	
H. A. Wilson	21 25	
M. G. Woodward	900 00	
Amounts carried forward . . .	$6,371 44	$208,193 99

BRIDGE DEPARTMENT, CAMBRIDGE BRIDGE — Continued.

Amounts brought forward . .	$6,371 44		$208,193 99
For draughtsmen: —			
A. F. Bildt	48 00		
H. F Sawtelle	586 88		
E. C. Sherman	586 87		
Axemen: —			
J. E Martin	402 00		
F. J. Steele	401 00		
Inspectors: —			
J. P. Carroll	884 00		
J. R. Hews	1,092 50		
Messengers: —			
C. P. Collins	242 50		
John Mountain	210 39		
Rodmen: —			
J. F. Gorman	573 37		
W. E. Hadley	74 25		
Transitmen: —			
Edward Barnwell	136 50		
F. M. Leonard	564 00		
		$12,173 70	
Clerical services: —			
Jas. A. McKibben	$125 00		
Chas. S. Parsons	125 00		
		250 00	
Advertising: —			
Boston Herald Co.	$13 88		
Sundry persons	17 49		
		31 37	
Analysis of cement: —			
Henry J. Williams		310 00	
Building shanty for engineers: —			
Holbrook, Cabot & Daly . .		83 48	
Carpenter work, Chas. Logue . .		71 97	
Carpenter work and piles: —			
John T. Scully & Bro. . . .		515 53	
Cash expended for travelling expenses and sundries: —			
M. G. Woodward		85 44	
Electrical work, General Electric Co.		5 03	
Engineers' instruments and repairs: —			
G. G. Ledder	$30 00		
A. T. Stearns Lumber Co . .	36 00		
Sundry persons	2 75		
		68 75	
Fuel, Coleman Bros.		8 32	
Amounts carried forward . . .		$13,603 59	$208,193 99

BRIDGE DEPARTMENT, CAMBRIDGE BRIDGE — Continued.

Amounts brought forward . .		$13,603 59	$208,193 99
Eor hardware, tools and supplies: —			
Dodge, Haley & Co. . . .	$41 90		
J. D Jewett & Co.	14 69		
Lang & Jacobs	6 00		
		62 59	
Inspecting sheathing		175 00	
Iron work: —			
Miller & Shaw	$91 10		
H. J. Shaw	149 23		
		240 33	
Lighting, Boston Gas Light Co. .		11 28	
Lumber: —			
E. B. James Lumber Co. . .	$1,277 85		
Geo. H. Jennings	82 40		
		1,360 25	
Paints, etc.: —			
Wadsworth, Howland & Co . .		12 00	
Paving, Street Department . .		161 19	
Photographs: —			
Whitney & Son , ...	$37 00		
Sundry persons . . , .	4 25		
		41 25	
Piers: —			
Two masonry piers: —			
Holbrook, Cabot & Daly . .	$28,979 10		
Eight masonry piers: —			
Holbrook, Cabot & Daly . .	103,278 19		
Unfinished work on ten piers: —			
Holbrook, Cabot & Rollins . .	803 20		
Top stones for ten piers: —			
Holbrook, Cabot & Rollins . .	2,257 87		
Two masonry abutments: —			
Holbrook, Cabot & Rollins . .	13,594 05		
Dredging and filling: —			
Holbrook, Cabot & Rollins . .	12,187 23		
Cut granite for upper masonry for eight piers: —			
Rockport Granite Co. . . .	22,070 58		
		183,170 22	
Plans, etc.: —			
Professional services: —			
E. M. Wheelwright . . .	$1,200 00		
Draughting	258 19		
		1,458 19	
Professional services of landscape architects: —			
Olmsted Bros.		119 61	
Amounts carried forward . . .		$200,415 50	$208,193 99

BRIDGE DEPARTMENT, CAMBRIDGE BRIDGE — Concluded.

Amounts brought forward . .			$200,415 50	$208,193 99
For scale models, John Evans & Co. .			219 50	
Services as counsel for commission :—				
Edgar R. Champlin . . .			212 50	
Stationery, printing, etc. : —				
City of Boston		$6 15		
J. Frank Facey		19 75		
J. L. Fairbanks & Co. . . .		5 75		
Frost & Adams Co. . . .		9 00		
Rockwell & Churchill . . .		12 25		
			52 90	
Telephone rent			23 47	
For Approach to Cambridge Bridge : —				
Carriage hire : —				
Whiting & Prescott . . .		6 00		
Execution of court : —				
Geo. H. Crocker et als. . . .		1,000 00		
Photographs, D. W. Butterfield .		6 00		
Services in suit, Fiske, Crocker & Sortwell : —				
Geo. H Bent . . .	$10 00			
Watson G Cutter & Sons	50 00			
Chas. D. Elliott . .	35 15			
W. A. Mason & Son .	15 00			
		110 15		
Services examining records, etc. :—				
Wm. V. Thompson .	$45 65			
Sundry persons . .	4 00			
		49 65		
			1,171 80	
Total				202,095 67
Surplus of Appropriation relinquished to General Treasury				$6,098 32

BRIDGE DEPARTMENT. (4.12)

PAVING HARVARD BRIDGE.

Appropriation	$23,000 00
Additional Appropriation	3,131 26
	$26,131 26

DEPARTMENT RECEIPTS. CARRIED TO GENERAL TREASURY.

For Paving between tracks : —		
Boston Elevated Railway Co. .	$3,131 26	

EXPENDED.

For Advertising : —		
Sundry persons	$6 80	
Cleaning, painting, etc. : —		
Albert A. Libby & Co. . . .	471 07	
Amounts carried forward . . .	$477 37	$26,131 26

BRIDGE DEPARTMENT, PAVING HARVARD BRIDGE — Concluded.

Amounts brought forward . .	$477 37	$26,131 26
For "Conservo," Samuel Cabot . .	30 80	
Inspector, F. A. Daunt . . .	20 12	
Lumber, Geo. McQuesten Co. . .	1,011 63	
Paving roadway: —		
U. S. Wood Preserving Co. . .	24,302 05	
Total		25,841 97
Surplus of Appropriation relinquished to General Treasury		$289 29

CEMETERY DEPARTMENT. (2.5)

SALARIES AND LABOR.

Appropriation		$15,000 00
EXPENDED.		
For salaries of: —		
Superintendent, Chas. S. Childs .	$1,599 96	
Bookkeeper, J. Watson Taylor .	1,092 00	
Clerk, Edward J. Brandon . .	100 00	
Foreman, Henry C. Hobbs . .	1,001 00	
Laborers	11,215 26	
Total		15,008 22
Excess of Expenditures over Appropriation . .		$8 22
Transfer to this Department from Contingent Fund .		400 00
		$391 78
Transfer from this Department to Cemetery Department, General Expenses		300 00
Balance relinquished to General Treasury . . .		$91 78

GENERAL EXPENSES.

Appropriation		$2,000 00
DEPARTMENT RECEIPTS. CARRIED TO GENERAL TREASURY.		
For Burials	$4,252 00	
Care	2,331 50	
Chapel	15 00	
Foundations	1,027 05	
Grading and sodding	205 55	
Interest on Cemetery Fund . .	1,975 02	
Myrtle grave	15 83	
Sale of land	1,300 00	
Sale of lots	8,290 61	
Slate and brick graves . . .	374 00	
Wood	19 00	
Sundries	139 12	
	$19,944 68	
Amount carried forward . . .		$2,000 00

CEMETERY DEPARTMENT, GENERAL EXPENSES — Continued.

Amount brought forward			$2,000 00
EXPENDED.			
For Brooms, Stephen Adams		$5 00	
Canvas, James Martin & Son		23 88	
Carpentry: —			
F. B. Furbish	$19 28		
Sundry persons	4 40		
		23 68	
Carriage hire: —			
John J. Donahue	$15 00		
Geo. F. Whiting & Co.	8 00		
Whiting & Prescott	34 00		
		57 00	
Car tickets: —			
Boston Elevated Railway Co.		15 00	
Carts and repairs, T. H. Kneeland		123 60	
Decorating: —			
New England Decorating Co.		24 00	
Directories, W. A. Greenough & Co.		6 00	
Expressage, Hatch & Co.		11 17	
Floral piece, Wm. E. Doyle		10 00	
Fuel, Metropolitan Coal Co.		16 74	
Grave boxes, Joseph W. Grigg		110 25	
Hardware, tools and repairs, and supplies: —			
Joseph Breck & Sons	$53 31		
E. T. Bynner	137 36		
Thos. H. Kneeland	26 77		
Sundry persons	5 50		
		222 94	
Harness repairs, John J. Hawkes		5 25	
Hay, grain, etc., E. R. Luke & Co.		88 20	
Horseshoeing, Wm. Balmer		17 00	
Labor and stock: —			
Water Works Department		6 11	
Lumber and cement: —			
Geo W. Gale, Lumber Co.		113 28	
Manure, Jeremiah Sullivan		76 00	
Mason work, John Delaney		15 60	
Painting, W. J. Edwards		116 85	
Plants, trees and seeds: —			
P. O'Brien & Son		119 00	
Plumbing, D. J. Wild & Co.		16 25	
Postage, F. M. Small		46 00	
Pruning, Frederick B. Shattuck		216 00	
Roof repairs, John J. Blevins		9 61	
Slate, Bangor Union Slate Co.		36 98	
Sods, James Gray		185 62	
Amounts carried forward		$1,717 01	$2,000 00

CEMETERY DEPARTMENT, GENERAL EXPENSES — Concluded.

Amounts brought forward		$1,717 01	$2,000 00
For stationery, printing, etc: —			
Amee Bros.	$37 85		
Caustic & Claflin	54 75		
Cotton & Gould	5 65		
J. A. Cummings Printing Co.	11 21		
Sundry persons	2 75		
		112 21	
Stone, Jeremiah Sullivan		158 34	
Stone dust, James Gray		143 00	
Stone work, Alex. McDonald & Son		83 25	
Street watering tax		6 46	
Sundries		6 60	
Teaming, Jeremiah Sullivan		81 10	
Telephone rent and tolls		80 74	
Vault covers, Structural Slate Co.		9 00	
Watering driveway: —			
Street Department		45 00	
Total			2,442 71
Excess of Expenditures over Appropriation			$442 71
Transfers to this Department: —			
From Cemetery Department, salaries and labor		$300 00	
" Contingent Fund		200 00	
			500 00
Balance relinquished to General Treasury			$57 29

FILLING LOW LANDS.

Appropriation			$1,055 73
EXPENDED.			
For Filling: —			
Jeremiah Sullivan		$1,055 52	
Total			1,055 52
Surplus of Appropriation relinquished to General Treasury			21

CITY CLERK DEPARTMENT. (1.2)

SALARIES AND CLERICAL ASSISTANCE.

Appropriation			$5,875 00
EXPENDED.			
For salaries of: —			
City Clerk, Edw. J. Brandon	$3,000 00		
Assistant City Clerk, A. M. Pear	1,400 00		
		$4,400 00	
Clerks: —			
Annie E Conley	$618 00		
Amanda R. Murray	618 00		
Amounts carried forward	$1,236 00	$4,400 00	$5,875 00

CITY CLERK DEPT., SALARIES AND CLERICAL ASSISTANCE — Concluded.

Amounts brought forward	$1,236 00	$4,400 00	$5,875 00
For temporary clerks: —			
Margaret A Dayton	121 06		
Anne Jacobs	250 00		
		1,607 06	
Total			6,007 06
Excess of Expenditures over Appropriation			$132 06
Transfer to this Department from City Clerk Department, other expenses			150 00
Balance relinquished to General Treasury			$17 94

GENERAL EXPENSES.

Appropriation $1,711 00

Department Receipts.	Carried to General Treasury.
For fees from sundry persons	$2,784 68

EXPENDED.

For Advertising		$17 25	
Binding: —			
The J. H. H. McNamee Co.	$9 50		
Wm. E. Toner	5 70		
		15 20	
Bonds: —			
John J. Ahern	$32 40		
Cambridge Insurance Agency	12 00		
		44 40	
Canvassing for births: —			
Manuel Andrew	$66 00		
Arthur L Farrell	42 00		
Emile J. Grenier	57 00		
Warren Ivers	33 00		
James E. Lennon	45 00		
Wm. F. McCormick	81 00		
Geo. H. Munroe	40 50		
John O'Connell	30 00		
Patrick J. White	60 00		
		454 50	
Expressage and teaming		7 60	
"Massachusetts Digest": —			
Little, Brown & Co.		5 00	
Pencil pointer, Carl Strauss		7 50	
Posting and serving notices: —			
Bay State Claim Co	$31 50		
James E. Lennon	57 00		
Arthur M. Stewart	11 60		
Sundry persons	3 50		
		103 60	
Amounts carried forward		$655 05	$1,711 00

CITY CLERK DEPARTMENT, GENERAL EXPENSES — Concluded.

Amounts brought forward . .		$655 05	$1,711 00
For recording deeds, E. O. Childs .		27 74	
Reporting births, sundry doctors, etc.		375 25	
"Revised Laws": —			
Commonwealth of Masssachusetts		6 00	
Stationery, printing, etc.: —			
Cambridge Chronicle Co. . .	$16 25		
Cambridge Times	7 75		
Caustic & Claflin	10 50		
City Messenger Department . .	87 14		
Cotton & Gould	42 55		
J. Frank Facey	87 75		
John H. Ford	16 00		
E. W. S. Jones	7 75		
Henry M. Meek Publishing Co. .	12 50		
Chas. H. Thurston	18 75		
Edw. W. Wheeler . . .	29 75		
Sundry persons . . .	7 95		
		344 64	
Sundries		15 84	
Telephone rent and tolls . .		67 18	
Tin boxes, Moynahan & Co. . .		9 12	
Verifying and obtaining facts for record, Wm. F. McCormick .		58 87	
Total			1,559 69
Surplus of Appropriation			$151 31
Transfer from this Department to City Clerk Department, Salaries and Clerical Assistants . .			150 00
Balance relinquished to General Treasury . . .			$1 31

CITY MESSENGER DEPARTMENT. (1.2)

SALARIES.

Appropriation			$2,400 00
EXPENDED.			
For salaries of: —			
City Messenger, Francis L. Pratt .		$750 00	
City Messenger, Frank T. Evans .		583 31	
Assistant, Frank T. Evans . .		220 00	
Assistant, Wm. E. McAnaul .		180 00	
Total			1,733 31
Surplus of Appropriation			$666 69
Transfer from this Department to Contingent Fund .			650 00
Balance relinquished to General Treasury . . .			$16 69

CITY MESSENGER DEPARTMENT — Continued.

GENERAL EXPENSES.

Appropriation			$300 00
EXPENDED.			
For car tickets: —			
Boston Elevated Railway Co.		$40 00	
Expressage: —			
American Express Co.	$7 09		
Hatch & Co.	8 85		
		15 94	
Rent of post office box		10 00	
Stationery, printing, etc: —			
City Messenger Department, Postage and Stationery	$88 46		
Sundry persons	2 00		
		90 46	
Subscriptions: —			
Geo. E. French	$8 85		
Sundry persons	2 50		
		11 35	
Sundries		5 25	
Telephone rent and tolls		124 14	
Total			297 14
Surplus of Appropriation relinquished to General Treasury			$2 86

POSTAGE AND STATIONERY. (1.7)

Appropriation			$1,200 00
DEPARTMENT RECEIPTS. CARRIED TO GENERAL TREASURY.			
For Supplies to Sundry Departments	$1,071 21		
EXPENDED.			
For Postage, F. M. Small		$775 00	
Stamps: —			
Pneumatic Hand Stamp Co.		1 16	
Stationery and supplies: —			
American Writing Machine Co.	7 00		
Cambridge Chronicle Co.	4 00		
Carter's Ink Co.	4 00		
Charles H. Thurston	7 50		
Cotton & Gould	301 33		
Eureka Novelty Co.	2 00		
E. F. Hunt & Co.	69 60		
J. A. Mundring	3 75		
Amounts carried forward	$399 18	$776 16	$1,200 00

CITY MESSENGER DEPT., POSTAGE AND STATIONERY — Concluded.

Amounts brought forward . .	$399 18	$776 16	$1,200 00
For Smith Premier T. W. Co. . .	10 75		
The A. F. Lewis Mfg. Co. . .	3 00		
		412 93	
Twine, E. T. Bynner		3 00	
Total			1,192 09
Surplus of Appropriation relinquished to General Treasury			$7 91

CIVIL SERVICE DEPARTMENT. (4.13)

Appropriation	$250 00

EXPENDED.

For salary of clerk, Harry L. Lincoln	$200 00	
Stationery, printing, etc.: —		
Thorp & Martin Co . . .	44 10	
Sundries	5 85	
Total		249 95
Surplus of Appropriation relinquished to General Treasury		05

CLERK OF COMMITTEES DEPARTMENT. (1.2)

SALARIES.

Appropriation	$3,600 00

EXPENDED.

For salaries of: —		
Clerk of Committees, John McDuffie	$2,400 00	
Assistant, Eben W. Pike . .	1,200 00	
Total		$3,600 00

GENERAL EXPENSES.

Appropriation			$400 00
EXPENDED.			
For Advertising: —			
Cambridge Chronicle Co. . .	$5 25		
Cambridge Democrat . . .	12 00		
Sundry persons	4 00		
		$21 25	
Advertising and printing: —			
D. A. Buckley Estate . . .	$6 00		
Press Newspaper Co. . . .	21 15		
		27 15	
Binding, David Farquhar . . .		6 00	
Amounts carried forward . . .		$54 40	$400 00

CLERK OF COMMITTEES DEPT.; GENERAL EXPENSES — Concluded.

Amounts brought forward . .		$54 40	$400 00
For directories: —			
Sampson, Murdock & Co. . .	$6 00		
Sundry persons	6 00		
		12 00	
"Revised Laws": —			
Commonwealth of Massachusetts .		6 00	
Stationery, printing, etc.: —			
Adams, Cushing & Foster . .	$12 00		
Cambridge Chronicle Co. . .	35 75		
City Messenger Department . .	111 19		
Cotton & Gould	46 90		
		205 84	
Subscriptions, sundry persons . .		11 50	
Sundries		7 62	
Telephone rent and tolls . . .		81 66	
Typewriting, G. W. Sanborn . .		20 00	
Total			399 02
Surplus of Appropriation relinquished to General Treasury			98

CONTINGENT FUND.

Appropriation (12.1) $20,000 00

DEPARTMENT RECEIPTS. CARRIED TO GENERAL TREASURY.

For Hawkers' and pedlers' licenses (10.6)	$175 00
Liquor licenses (10.5) . . .	57 00
Old taxes (10 9)	34 00
Paige's History (1.7) . . .	18 00
Proprietors' Record (1.7) . .	12 00
	$296 00

EXPENDED.

For car tickets for military companies, Boston & Maine R R. (2.7) .		$223 24	
City Council Expenses: — (1.2)			
Salaries: —			
Clerk, Edw. A. Counihan	$500 00		
Page, Frank T. Evans	100 00		
	600 00		
Advertising: —			
Cambridge Chronicle Co	$15 00		
Cambridge Democrat	18 25		
Cambridge Times	23 25		
Cambridge Tribune	11 00		
Press Newspaper Co.	73 95		
	141 45		
American Digest, West Pub. Co. .	14 00		
Century Digest, West Pub. Co. .	42 00		
Amounts carried forward . . .	$797 45	$223 24	$20,000 00

CONTINGENT FUND — Continued.

Amounts brought forward . .	$797 45	$223 24	$20,000 00
For binding City Documents: —			
Wm. E. Toner, Mgr. . .	70 80		
Binding Proprietors and Town Records: —			
Boston Bookbinding Co. . .	32 48		
Carriage hire	28 00		
Car tickets: —			
Boston Elevated Railway Co. .	200 00		
Engrossing resolutions: —			
Frank L. Wells	34 00		
Expenses of Committees: —			
Committee on Bath House: —			
Carriage hire	10 00		
Refreshments	14 00		
Committee on Engineering and Sewers: —			
Refreshments	10 00		
Committee on Finance: —			
Carriage hire	3 00		
Refreshments	116 00		
Committee on Fire Department: —			
Carriage hire . . .	18 00		
Refreshments	10 50		
Committee on Health Department: —			
Carriage hire	13 00		
Committee on Highways: —			
Car fares	13 84		
Carriage hire	111 00		
Refreshments	149 25		
Committee on Licenses: —			
Carriage hire	23 00		
Refreshments	10 00		
Committee on Public Property: —			
Carriage hire	54 50		
Refreshments	50 25		
Floral emblems: —			
Wm. E. Doyle . . $28 00			
Walter H. Murdock . 8 00			
P. O'Brien & Son . . 70 00			
	106 00		
Printing: —			
Camb. Chronicle Co. . $253 36			
Co-operative Press . 151 00			
Amounts carried forward . $404 36	$1,874 57	$223 24	$20,000 00

CONTINGENT FUND — Continued.

Amounts brought forward	$404 36	$1,874 57	$223 24	$20,000 00
For J. A. Cummings Printing Co.	1,221 32			
J. Frank Facey	176 50			
Press Newspaper Co.	10 00			
		1,812 18		
Refreshments		18 00		
			3,704 75	
Damages awarded and suits settled: — (4.13)				
Jos O. Authier		$25 00		
Nellie J. Blevins		300 00		
Fannie P. Browning		25 00		
Mary W. Clark		400 00		
Bessana Clay		600 00		
Julia Curtin		10 00		
Patrick Dee		50 00		
A. J. Dewhurst		10 00		
Elizabeth Doyle		350 00		
Mary A Finnigan		100 00		
Wm. Gordon and John Nixon		25 00		
Bernard Houghton		100 22		
Emma J. Maddox		15 00		
Thos. Murphy		175 00		
Albert F. Norman		150 00		
Jere. W. O'Connor		50 00		
A. B. Reed		20 00		
Jas. J. Roper		500 00		
Manuel G. Silva		100 00		
Clara J. Stacy		251 50		
			3,256 72	
Expense of placing Charles Sumner's statue: — (7.5)				
Labor, as per pay-rolls		$182 58		
Teaming		3 00		
			185 58	
Expenses of Inauguration Day: — (1.7)				
Flowers and plants: —				
P. O'Brien & Son			30 00	
Expense of entertaining Prince Henry: — (1.7)				
Carriage hire: —				
T. W. Hillier & Co		$12 00		
Coffee, J. U. Wescott		14 00		
Decorating City Hall: —				
N E. Decorating Co.		135 00		
Engrossing, "Prince Henry Welcome": —				
Frank L. Wells		35 00		
Oats, J. Cushing & Co.		7 56		
Amounts carried forward		$203 56	$7,400 29	$20,000 00

CONTINGENT FUND — Continued.

Amounts brought forward . .	$203 56	$7,400 29	$20,000 00
For use of horses: —			
Fred D. Norton . . $36 50			
Whiting & Prescott . 25 00			
	61 50		
Use of equipments: —			
National Lancers . . .	18 00		
		283 06	
Expense of the Gray hearing: — (1.7)			
Binding "Gray Hearing": —			
J. H. H. McNamee Co. . .	4 50		
Cash paid for witness fees . .	72 90		
Dinners, M. R. Jones . . .	525 00		
Printing: —			
Cambridge Chronicle Co. $9 00			
J Frank Facey . . 3 00			
	12 00		
Serving subpœnas: —			
Bay State Claim Co. . $45 72			
Jas. E. Lennon . . 51 40			
Lyman H. Richards . 31 70			
	128 82		
Stenographer's services: —			
Wm. F. Murray	2,942 50		
		3,685 72	
Liquor licenses, Commonwealth of Massachusetts. (10 5) . .		14 25	
Memorial Day Appropriation. (7.4) .		1,100 00	
Notifying voters: — (1 5)			
Clerical services: —			
Margaret A. Dayton . . .	$7 00		
Rose E. Manning . . .	6 50		
Postal cards, F. M. Small .	150 00		
Printing postal cards: —			
J. Frank Facey	20 00		
		183 50	
Refund of excess of taxes: —			
Benj. F. Brown. (10.1) . .		128 12	
Ringing bells on holidays: — (7.4) .		75 00	
Searching records: — (1.7)			
Wm. V. Thompson		8 00	
Sinking Funds: —			
Salaries: — (1.4)			
Treasurer, W. W. Dallinger .	$300 00		
Secretary, John McDuffie . .	25 00		
Amounts carried forward . . .	$325 00	$12,877 94	$20,000 00

CONTINGENT FUND — Concluded.

Amounts brought forward . .	$325 00	$12,877 94	$20,000 00
For rent of boxes: —			
Boston Safe Deposit Co. . .	40 00		
Cambridge Trust Co. . . .	40 00		
		405 00	
Sundries (12 1)		10 98	
Total			13,293 92
Surplus of Appropriation			$6,706 08
Transfers to this Department from Sundry Departments			8,830 00
			$15,536 08
Transfers from this Department to Sundry Departments			14,210 00
Balance relinquished to General Treasury . . .			$1,326 08

ELECTION EXPENSES, CITY CLERK. (1.5)

Appropriation			$5,700 00
	EXPENDED.		
For Election officers	$3,048 00		
Precinct men	280 00		
Bell ringers	26 00		
Special pay-roll, police officer, clerk, etc.	59 00		
Clerical assistance: —			
Margaret A. Dayton . . .	44 75		
Anne Jacobs	25 00		
		$3,482 75	
Advertising: —			
D. A. Buckley Estate . . .	$15 00		
Cambridge Chronicle Co. . .	40 00		
Cambridge Democrat . . .	77 00		
Cambridge Times	77 00		
F. S Hill	13 50		
Press Newspaper Co. . . .	52 00		
		274 50	
Apples, L. B. Chandler . . .		5 25	
Ballot boxes, D. K. Dinsmore . .		9 60	
Barge hire: —			
A. Nixon	$12 00		
John Nixon	30 00		
Whiting & Prescott	4 00		
		46 00	
Binding and mounting voting lists: —			
J. H. H. McNamee	$95 05		
J. H. H. McNamee Co. . . .	24 40		
Wm. E Toner	12 50		
		131 95	
Carpentry, W. H. Norris . . .		112 16	
Amounts carried forward . . .		$4,061 61	$5,700 00

ELECTION EXPENSES, CITY CLERK — Continued.

Amounts brought forward		$4,061 61	$5,700 00
For carriage hire: —			
John J. Corkery	$4 00		
David Crowley	7 50		
F. R. Nickerson	11 00		
		22 50	
Car tickets: —			
Boston Elevated Railway Co.		15 00	
"Caucus Laws." Richard L. Gay		15 00	
Glazing, J. L. P. Ackers		10 00	
Hardware and supplies, etc.: —			
E. T Bynner	$8 51		
Sundry persons	23 84		
		32 35	
Labor: —			
T. J. Denton	$80 73		
John Hart	8 05		
		88 78	
Lithographs: —			
Forbes Lithograph Mfg Co.		227 00	
Lunches, W. S. Sprague		20 45	
Painting, M. A. Feeley		29 45	
Papering screen, J. J. Foley		6 75	
Posting and serving notices: —			
Geo H. Munroe	$16 50		
Fred E. Thyng	18 00		
Patrick J. White	7 50		
		42 00	
Printing wheels: —			
New Haven Car Register Co.		9 00	
Rent, Union Hall Association		51 00	
Repairing ballot boxes: —			
Hall Bros.		28 45	
Serving certificates of election: —			
Jas. E. Lennon		9 00	
Services, obtaining facts for record: —			
Wm. F. McCormick		29 25	
Setting vault door, Henry McGahey		21 25	
Signs, Thos. Sweeney		37 00	
Stamps, etc.: —			
Boston Stencil and Stamp Works		86 45	
Stationery, printing, etc: —			
Cambridge Chronicle Co.	$93 00		
Caustic & Claflin	183 50		
City Messenger Department	47 87		
Co-operative Press	27 25		
Amounts carried forward	$351 62	$4,842 29	$5,700 00

ELECTION EXPENSES, CITY CLERK — Concluded.

Amounts brought forward	$351 62	$4,842 29	$5,700 00
For Cotton & Gould	57 05		
J. A. Cummings Printing Co.	195 25		
J. Frank Facey	697 85		
Chas. H. Thurston	12 36		
Sundry persons	3 50		
		1,317 63	
Teaming, P. Biggin		10 00	
Telephone service		5 00	
Vault door, Morris-Ireland Safe Co.		50 00	
Total			6,224 92
Excess of Expenditures over Appropriations			$524 92
Transfer to this Department from Contingent Fund			525 00
Balance relinquished to General Treasury			08

ELECTION EXPENSES, REGISTRARS OF VOTERS. (1.5)

Appropriation			$3,500 00
EXPENDED.			
For salaries of Registrars of Voters and Clerk: —			
F. W. Macdonald	$500 00		
John P. McCormick	500 00		
Isaac S. Pear	600 00		
C. Burnside Seagrave	500 00		
		$2,100 00	
Clerical assistance: —			
Anne Jacobs	$42 50		
Ella A. Lothrop	250 00		
Jessie I. R. Waterman	1 50		
		294 00	
Clerical assistance at recount: —			
F. W Cone	$18 00		
E A. Counihan	20 50		
C. H Dodge	18 00		
F. T. Evans	16 50		
R. S. Hoffman	18 50		
Warren Ivers	5 50		
H. L Lincoln	18 00		
J. E. Price	18 00		
J. A. Rice	18 00		
E. F. Wadden	18 00		
J. H. Webber	19 00		
		188 00	
Advertising: —			
Cambridge Times	$51 50		
Cambridge Democrat	49 50		
Press Newspaper Co.	39 57	140 57	
Binding: —			
David Farquhar	$32 30		
J. H. H. McNamee	7 75		
		40 05	
Amounts carried forward		$2,762 62	$3,500 00

ELECTION EXPENSES, REGISTRARS OF VOTERS — Concluded.

Amounts brought forward		$2,762 62	$3,500 00
For carriage hire: —			
F. R. Nickerson		37 50	
Labor, T. J. Denton		16 05	
Moving furniture: —			
P. Biggin		10 00	
Placing and removing boards: —			
W. H. Norris		54 35	
Posting notices: —			
Geo. H. Munroe		34 50	
Stationery, printing, etc.: —			
Cambridge Chronicle Co.	$174 00		
City Messenger Department	25 10		
E. W. S. Jones	31 50		
		230 60	
Sundries		6 28	
Telephone rent and tolls		11 05	
Total			3,162 95
Surplus of Appropriation			$337 05
Transfer to this Department from Contingent Fund			400 00
Balance relinquished to General Treasury			$737 05

ELECTION EXPENSES, SUPERINTENDENT OF PUBLIC BUILDINGS. (1.5)

Appropriation	$1,700 00
Revenue appropriated	550 00
	$2,250 00

DEPARTMENT RECEIPTS. CARRIED TO GENERAL TREASURY.

For Voting booths, Health Department	$884 00

EXPENDED.

For Carpentry, W. H. Norris		$1,126 35	
Lighting apparatus, Geo. F. Dickson		26 70	
Mason work, Henry McGahey		50 40	
Moving booths: —			
H. S. Angus & Son	$35 00		
J. A. McIsaac	106 20		
		141 20	
Preparing rooms for voting		309 75	
Rent: —			
Chas. Beck Post 56, G. A. R.	$105 00		
Edw. G. Burwell	10 00		
Amounts carried forward	$115 00	$1,654 40	$2,250 00

ELECTION EXPENSES, SUPERINTENDENT OF PUBLIC BUILDINGS — Concluded.

Amounts brought forward . .	$115 00	$1,654 40	$2,250 00
For Citizens' Trade Association . .	60 00		
Wm. L. Lockhart . . .	50 00		
M. U. Hall Association . . .	33 00		
Mt. Sinai Building Association .	75 00		
J. F. Noera	21 00		
Observatory Hill Club . . .	10 00		
Odd Fellows Hall Association	120 00		
J. F. O'Brien	50 00		
The Prospect Union . . .	40 00		
T. H. Raymond	35 00		
Red Jacket Vet. Firemen's Assoc.	57 50		
St. John's Literary Institute . .	130 00		
St. Paul's A. M. E. Church . .	60 00		
Union Hall Association . . .	470 00		
		1,326 50	
Sundries		9 78	
Voting booths, J. A. McIsaac . .		298 00	
Total			3,288 68
Excess of Expenditures over Appropriations . .			$1,038 68
Transfers to this Department from Contingent Fund .			1,100 00
Balance relinquished to General Treasury . . .			$61 32

ELECTRICAL DEPARTMENT, STREET LIGHTING. (4.5)

SALARIES.

Appropriation	$1,000 00

EXPENDED.

For salary of superintendent: —		
Chas. F. Hopewell	$1,000 00	
Total		$1,000 00

GENERAL EXPENSES

Appropriation	$73,000 00

DEPARTMENT RECEIPTS. CARRIED TO GENERAL TREASURY.

For old material	$0 35

EXPENDED.

For Harness and repairs and horse clothing: —			
Ordway, Loring & Ricker . .	$16 75		
Sundry persons	2 20		
		$18	
Horse board: —			
Prospect Stables	$225 00		
Whiting & Prescott . . .	75 00		
		300 00	
Amounts carried forward . . .		$318 95	$73,000 00

ELECTRICAL DEPARTMENT, STREET LIGHTING, GENERAL EXPENSES — Concluded.

Amounts brought forward		$318 95	$73,000 00
For horseshoeing: —			
Wm. Balmer	$12 50		
Sundry persons	2 10		
		14 60	
Lamp, Nernst Lamp Co.		6 00	
Lighting streets: —			
Cambridge Electric Light Co.: —			
Arc	$52,442 93		
Incandescent	11,959 55		
Welsbach Street Lighting Co.	8,419 37		
		72,821 85	
Moving arc lamp: —			
Cambridge Electric Light Co.		5 25	
Removing and setting lamp posts: —			
Cambridge Gas Light Co.		23 58	
Stationery, printing and typewriter supplies: —			
Cotton & Gould	$5 00		
J. A. Cummings Printing Co.	6 78		
Samuel Ward Co.	11 15		
Sundry persons	4 23		
		27 16	
Sundries		4 25	
Telephone rent and tolls		28 00	
Total			73,249 64
Excess of Expenditures over Appropriation			$249 64
Transfer to this Department from Contingent Fund			310 00
Balance relinquished to General Treasury			$60 36

ELECTRICAL DEPARTMENT, WIRE ACCOUNT. (2.2a)

SALARIES AND LABOR.

Appropriation			$7,000 00
EXPENDED.			
For salaries of: —			
Inspector of Wires: —			
Chas. F. Hopewell		$1,000 00	
Assistants		5,767 50	
Clerk, Lillian W. Hyde		312 00	
Total			7,079 50
Excess of Expenditures over Appropriation			$79 50
Transfer to this Department from Electrical Department, Wire Account, General Expenses			80 00
Balance relinquished to General Treasury			50

ELECTRICAL DEPARTMENT — Continued.

GENERAL EXPENSES.

Appropriation		$3,000 00

DEPARTMENT RECEIPTS. CARRIED TO GENERAL TREASURY.

For labor and materials	$167 66	

EXPENDED.

For Apparatus and repairs and electrical supplies: —			
American Electrical Works	$113 48		
American Steel & Wire Co.	289 19		
Barbour-Stockwell Co.	21 41		
Crocker-Wheeler Co.	21 10		
W. E. Decrow	87 42		
Eastern Drug Co.	15 15		
Edes Manufacturing Co.	26 25		
Electric Gas Lighting Co.	90 96		
Electric Maintenance Co.	10 60		
Electric Storage Battery Co.	10 83		
F. M. Ferrin	52 00		
A. H. Hews & Co.	100 00		
Holtzer-Cabot Electric Co.	28 88		
Kellogg Switchboard & Supply Co.	181 20		
Pettingell, Andrews Co.	129 37		
Simplex Electric Co.	15 75		
Stuart, Howland & Co.	19 63		
U. S. Fire & Police Telegraph Co.	7 50		
Sundry persons	8 47		
		1,179 19	
Bicycle repairs, J. L. Moseley		11 50	
Car tickets: —			
Boston Elevated Railway Co.		60 00	
Expressage: —			
Dodge Express Co.	$6 15		
Sawin's Express	29 83		
Sundry persons	5 70		
		41 68	
Furniture, furnishings and repairs: —			
The Globe-Wernicke Co.	$6 50		
Worcester Bros.	11 98		
		18 48	
Hardware, tools and supplies: —			
Brock Bros.	$9 60		
Brock & Eaton	12 59		
E. T. Bynner,	12 17		
Dover Stamping & Mfg. Co.	6 28		
J. D. Jewett Co.	14 27		
Anthony S. Morss	11 09		
Redding, Baird & Co.	6 00		
A. M. Robbins	8 46		
H. J. Shaw	6 50		
A. J. Wilkinson & Co.	7 04		
James H. Wyeth & Co.	16 90		
Sundry persons	15 68		
		126 58	
Amounts carried forward		$1,437 43	$3,000 00

ELECTRICAL DEPARTMENT, GENERAL EXPENSES — Concluded.

Amounts brought forward . .		$1,437 43	$3,000 00
For harness and repairs, and horse clothing: —			
Thos. McMahon	$10 50		
Ordway, Loring & Ricker . .	13 25		
Sundry persons	1 70		
		25 45	
Heating building: —			
Public Property Department, "City Buildings"		100 00	
Horse board: —			
Cambridge Coach Co. . . .	$175 00		
Irving Blake	125 00		
Fire Department	100 00		
		400 00	
Horseshoeing: —			
Wm. Balmer	$66 70		
Street Department	6 70		
Sundry persons	1 50		
		74 90	
Laundry work, F. L. Churchill . .		13 89	
Lighting, Cambridge Elec. Light Co.		57 02	
Oil, varnish, paints, etc: —			
W. J Edwards	$13 09		
Wadsworth, Howland & Co. . .	31 25		
		44 34	
Paper and rag stock: —			
Chas. E. Perry & Co. . . .		127 60	
Stationery, printing, etc: —			
City Messenger Department . .	$12 23		
J. A. Cummings Printing Co. .	24 06		
Samuel Ward Co.	7 95		
Louis F. Weston	23 00		
Wright & Potter	11 75		
Sundry persons	10 27		
		89 26	
Sundries		25 83	
Telephone rent and tolls . .		316 24	
Telephone receivers, Wm. J. Murdock & Co.		86 30	
Towels, Parke Snow		11 80	
Wagon repairs: —			
T. H. Kneeland	$38 15		
Geo. O. Rollins Carriage Co. . .	25 55		
Charles Waugh & Co. . . .	44 05		
Sundry persons	1 40		
		109 15	
Total			2,919 21
Surplus of Appropriation			$80 79
Transfer from this Department to Electrical Department, Wire Accounts, Salaries			80 00
Balance relinquished to General Treasury . . .			79

ENGINEERING DEPARTMENT. (4.1)

SALARIES AND CLERICAL ASSISTANCE.

Appropriation			$9,900 00
EXPENDED.			
For salaries of: —			
Engineer, L. M. Hastings		$3,000 00	
Assistants		5,861 96	
Clerk, Mary E. Rowen		390 00	
Total			9,251 96
Surplus of Appropriation relinquished to General Treasury			$648 04

GENERAL EXPENSES.

Appropriation			$900 00
EXPENDED.			
For Cane seat stools: —			
Phillips Bros. & Co.		$10 50	
Car tickets: —			
Boston Elevated Railway Co.		125 00	
Expressage, Sundry persons		4 55	
Hardware, tools and repairs, and supplies: —			
D. W. Hyde & Co.	$9 53		
F. A. White	12 84		
Sundry persons	7 40		
		29 77	
Instruments and repairs: —			
C. L. Berger & Sons	$21 92		
Keuffel & Esser Co.	8 50		
Sundry persons	9 95		
		40 37	
Photographs, blue prints and supplies: —			
Spaulding Print Paper Co.	$8 82		
Sundry persons	1 00		
		9 82	
Plans, "Charles River Parkway": —			
The Forbes Lithograph Mfg. Co.		59 28	
Post, Austin Ford & Son		9 00	
Stationery, printing and drawing materials: —			
City Messenger Department	$27 90		
Cotton & Gould	124 20		
J. A. Cummings Printing Co.	18 44		
Eugene Dietzgen Co.	5 80		
John H. Ford	98 25		
Frost & Adams Co.	80 94		
Amounts carried forward	$355 53	$288 29	$900 00

ENGINEERING DEPARTMENT, GENERAL EXPENSES — Concluded.

Amounts brought forward . .	$355 53	$288 29	$900 00
For G. G. Ledder	5 60		
Thorp & Martin Co. . . .	9 40		
Sundry persons	17 65		
		388 18	
Sundries		8 16	
Tapes, Lufkin Rule Co. . . .		8 79	
Telephone rent and tolls . . .		82 60	
Total			776 02
Surplus of Appropriation relinquished to General Treasury			$123 98

ASSESSORS' PLANS. (1.4)

Appropriation	$300 00

EXPENDED.

For services of engineers . . .	$229 35	
Total		229 35
Surplus of Appropriation relinquished to General Treasury		$70 65

EXECUTIVE DEPARTMENT. (1.1)

SALARIES AND CLERICAL ASSISTANCE.

Appropriation	$4,864 00

EXPENDED.

For salaries of: —		
Mayors: —		
David T. Dickinson . . .	$291 67	
John H. H. McNamee . . .	3,208 33	
Clerk, Edw. A. Counihan . . .	1,000 00	
Stenographer, Georgie W. Sanborn .	364 00	
Total		$4,864 00

GENERAL EXPENSES. (1.1)

Appropriation	$536 00

EXPENDED.

For Advertising, Press Newspaper Co.		$7 00	
Binding, J. H. H. McNamee Co. .		6 25	
Carriage hire: —			
J. J. Corkery	$5 00		
T. W. Hillier & Co. . .	7 00		
Amounts carried forward . .	$12 00	$13 25	$536 00

EXECUTIVE DEPARTMENT, GENERAL EXPENSES — Concluded.

Amounts brought forward	$12 00	$13 25	$536 00
For Geo. D. Merrill	10 00		
Fred D. Norton	10 00		
Whiting & Prescott	10 00		
		42 00	
Car tickets: —			
Boston Elevated Railway Co.		5 00	
Cash expended for traveling expenses, Chas. F. Hopewell		27 29	
Directory, Sampson, Murdock & Co.		6 00	
Refreshments, M. R. Jones		15 00	
Stamps: —			
Boston Stencil and Stamp Works		4 75	
Stationery, printing, etc.: —			
City Messenger Department	$59 90		
Cotton & Gould	18 95		
J. A. Cummings Printing Co.	34 98		
J. Frank Facey	24 50		
Chas. H. Thurston	5 20		
Sundry persons	1 00		
		144 53	
Stenography, Georgie W. Sanborn		16 25	
Sundries		1 25	
Telephone rent and tolls		117 13	
Typewriter repairs and supplies: —			
Smith Premier Typewriter Co.		10 05	
Work on maps: —			
Rose E. Manning	$39 50		
G. W. Sanborn	20 50		
H. M. Ulmer	61 50		
		121 50	
Total			524 00
Surplus of Appropriation relinquished to General Treasury			$12 00

FIRE DEPARTMENT. (2.2)

SALARIES.

Appropriation	$78,300 00

EXPENDED.

For salaries of: —		
Chief, Thos. J. Casey	$2,000 00	
Asst. Chief, N. W. Bunker	1,400 00	
Permanent men as per pay rolls	58,174 88	
Call men as per pay rolls	14,732 63	
Amounts carried forward	$76,307 51	$78,300 00

FIRE DEPARTMENT, SALARIES — Concluded.

Amounts brought forward	$76,307 51	$78,300 00
For Pension pay roll: —		
Wm. Parks	215 00	
Edward E. Priest	516 00	
James H. Skehan	516 00	
Total		77,554 51
Surplus of Appropriation		$745 49
Transfer from this Department to Fire Department, General Expenses		350 00
Balance relinquished to General Treasury		$395 49

GENERAL EXPENSES.

Appropriation $15,200 00

DEPARTMENT RECEIPTS. CARRIED TO GENERAL TREASURY.

For Board of horse	$100 00
Old hose carriage	20 00
Old wagon	10 00
	$130 00

EXPENDED.

For Apparatus (New): —		
Hose wagon, Chas Waugh & Co.	$445 00	
Truck, Abbot-Downing Co.	1,650 00	
		$2,095 00
Apparatus and repairs: —		
Abbot-Downing Co.	$65 37	
American Locomotive Works	49 82	
Barbour-Stockwell Co.	15 75	
Henry K. Barnes	25 37	
Chas. E. Berry	420 10	
Boston Woven Hose Co.	797 80	
Wm. Campbell & Co.	9 25	
Wm. Elliott & Co.	181 10	
F. Ivers & Son	158 50	
Henry McGahey	10 65	
Peter McMurray	61 20	
C. W. H. Moulton & Co.	81 00	
Joseph Palmer	33 64	
Geo. Patterson	28 08	
Scrannage Bros.	75 57	
H. J. Shaw	37 60	
Chas. Waugh & Co.	123 77	
		2,174 57
Brooms, F. Pelkey		42 00
Directory, E. F. Hunt & Co.		6 00
Dues, Gas Consumers' Association		9 00
Expressage and teaming: —		
Savage & Son	$25 67	
Sundry persons	8 45	
		34 12
Fuel, Metropolitan Coal Co.		779 24
Amounts carried forward		$5,139 93 $15,200 00

FIRE DEPARTMENT, GENERAL EXPENSES — Continued.

Amounts brought forward		$5,139 93	$15,200 00
For furniture, furnishings and bedding: —			
J. H. Corcoran & Co.	$15 00		
S. H. Harrington	13 20		
D. W. Hyde & Co.	48 86		
Worcester Bros.	186 10		
		263 16	
Hardware, tools and supplies: —			
Brock Bros.	$21 86		
E. T. Bynner	215 49		
Cambridge Hardware Co.	12 47		
J. A. Holmes & Co.	12 53		
H. N. Hovey & Co.	5 29		
James Maitland	7 50		
Milwaukee Dustless Brush Co.	20 00		
F. A. White	36 49		
James H. Wyeth & Co.	6 18		
Sundry persons	12 50		
		350 31	
Harness and repairs: —			
Chas. E. Berry	$47 00		
M. Cavanagh	82 35		
Owen Doherty	124 00		
F. Ivers & Son	17 75		
Wm. H. Roberts	53 75		
Sundry persons	8 10		
		332 95	
Hay, grain and straw: —			
Cambridge Grain Co.	$11 96		
J. Cushing & Co.	3,461 98		
P. H. Dardis	169 05		
E. R. Luke & Co.	1,047 75		
Geo. G. Wright	22 68		
		4,713 42	
Heating buildings: —			
Public Property Department, "City Buildings"		375 00	
Horses: —			
P. H. Dardis	$300 00		
Welch & Hall Co.	200 00		
		500 00	
Horseshoeing: —			
Wm. Balmer	$34 00		
Wm. Bell	64 75		
D. L. Bolger Horseshoeing Co.	76 50		
P. J. Callahan	92 00		
James C. Croucher	43 25		
E. E. Donahue	9 25		
W. F. Garrett	95 00		
John F. Gurry & Sons	128 25		
T. Hickey	68 50		
Stephen Leary	18 75		
C. M. MacLeod	10 75		
Alex. McDonald	19 25		
Bernard Smith	69 75		
Thomas Smith	58 50		
		788 50	
Amounts carried forward		$12,463 27	$15,200 00

FIRE DEPARTMENT, GENERAL EXPENSES — Continued.

Amounts brought forward		$12,463 27	$15,200 00
For house repairs: —			
Carpentry: —			
Alfred Allcock	$70 89		
Michael A. Keenan	36 75		
W. H. Norris	154 02		
John Quin & Son	10 74		
Heating apparatus repaired: —			
Wm. Campbell & Co.	92 46		
Higgins & Co.	15 30		
Inspection of boiler, S. C. Baxter	12 00		
Painting, glazing, etc: —			
J. J. Foley	76 00		
Plastering: —			
Wm. J. Heron	12 33		
Plumbing: —			
Higgins & Co.	10 15		
H. L. Rose	19 34		
Thos. C. Sweeney & Co.	9 15		
Roof repairs: —			
John J. Blevins	85 85		
		604 98	
Ice: —			
Cambridge Ice Co.	$22 40		
Fresh Pond Ice Co.	28 55		
Independent Ice Co.	6 00		
		56 95	
Insignias, Miss B. Goldsmith		7 50	
Laundry work: —			
University City Laundering Co.		245 49	
Lighting: —			
Cambridge Electric Light Co.	$289 02		
Cambridge Gas Light Co.	461 20		
		750 22	
Lumber and mill work: —			
Geo. W. Gale Lumber Co.	$54 94		
M. F Tracy & Son	11 10		
		66 04	
Oil, polish, etc.: —			
Cochrane Chemical Co	$23 58		
J. Wesley Edmonds	38 25		
Edward McDermott & Co.	6 60		
Wm. F. Nye	9 90		
Standard Oil Co.	65 84		
Sundry persons	4 75		
		148 92	
Paving, Wm. Gore		66 22	
Printing, Cambridge Chronicle Co.		20 00	
Refreshments, Mrs. Jas. H. Cole		26 50	
Shavings, C. W. H. Moulton & Co.		28 95	
Soap and powder, Chas. R. Teele		22 25	
Soda, Mathieson Alkali Works		30 24	
Amounts carried forward		$14,537 53	$15,200 00

FIRE DEPARTMENT, GENERAL EXPENSES — Concluded.

Amounts brought forward		$14,537 53	$15,200 00
For stationery, printing, etc.: —			
Cotton & Gould	$5 25		
J. A. Cummings Printing Co.	10 71		
Sundry persons	8 58		
		24 54	
Sulpho-Napthol, Sulpho-Napthol Co.		24 00	
Sundries		14 20	
Telephone rent and tolls		104 00	
Use of men and horses: —			
T. A. Callaghan	$7 00		
P. H. Dardis	494 00		
Frank F. Duvey	97 00		
G. F. Farnum	74 00		
Jas. P. McSorley	121 00		
Peter Tumilty	19 00		
George Yore	13 00		
		825 00	
Total			15,529 27
Excess of Expenditures over Appropriation			$329 27
Transfer to this Department from Fire Department, Salaries			350 00
Balance relinquished to General Treasury			$20 73

HEALTH DEPARTMENT. (2.4)

SALARIES.

Appropriation	$12,000 00

EXPENDED.

For salaries of: —		
Medical Inspector, Dr. E. Farnham	$3,000 00	
Clerk, James B. Soper	1,200 00	
Secretary, Grace E. Wyeth	800 00	
Sanitary Inspectors: —		
John A. Jackson	950 00	
Chas. A. Lincoln	950 00	
Daniel W. Parker	600 60	
George W. White	292 50	
School Inspectors: —		
F. J. Barnes, M. D.	48 81	
Frank F. Carr, M. D.	200 00	
Geo. P. Cogswell, M. D.	200 00	
Bessie D. Davis, M. D.	200 00	
Chas. M. Hutchinson, M. D.	200 00	
E. A. McCarthy, M. D.	100 00	
W. A. Putnam, M. D.	200 00	
N. V. Shannon, M. D.	200 00	
Amounts carried forward	$9,141 91	$12,000 00

HEALTH DEPARTMENT, SALARIES — Concluded.

Amounts brought forward	$9,141 91	$12,000 00
For bacteriologist, E. A. Darling, M. D.	1,080 00	
Driver, R. M. O'Brien	772 87	
Plumber, John McCormick	950 00	
Total		11,944 78
Surplus of Appropriation relinquished to General Treasury		$55 22

GENERAL EXPENSES.

Appropriation	$5,000 00

Department Receipts. Carried to General Treasury.

For burial	$45 00	
Care of sick	798 57	
Expenses of contagious disease, Commonwealth of Massachusetts	4,132 86	
	$4,976 43	

EXPENDED.

For Board and care, Cambridge Hospital		$2,748 34	
Car tickets: —			
Boston Elevated Railway Co.		$450 00	
Cash paid for burying dead animals: —			
Frank L. Corcoran	$10 50		
Edwin Farnham	70 75		
Sundry persons	75		
		82 00	
Expressage, sundry persons		4 55	
Frame, J. F. O sson & Co.		8 40	
Gas, Cambridge Gas Light Co.		16 20	
Hardware, tools and supplies: —			
Brock & Eaton	$7 00		
E. T. Bynner	20 72		
Sundry persons	3 60		
		31 32	
Harness and repairs: —			
Wm. H. Roberts		84 60	
Horse board and storage: —			
Whiting & Prescott		360 00	
Horse clipping: —			
Ferris & Co.	$6 00		
Sundry persons	1 00		
		7 00	
Horseshoeing, W. F. Garrett		34 00	
Illustrating lecture, B. D. B. Bourne		11 50	
Letter files, Globe-Wernicke Co.		6 00	
Amounts carried forward		$3,843 91	$5,000 00

HEALTH DEPARTMENT, GENERAL EXPENSES — Concluded.

Amounts brought forward . .		$3,843 91	$5,000 00
For medicine, drugs, etc. : —			
J. A & W. Bird & Co. . . .	$177 35		
Walter A. Claflin	18 35		
Wm C. Wright . . .	148 15		
Sundry persons	4 20		
		348 05	
Medical supplies and apparatus, and repairs : —			
Harvard Co-operative Society .	$11 66		
R. C. Robinson & Co. . . .	14 80		
Sundry persons	3 80		
		30 26	
Painting, J. L. P. Ackers . . .		25 00	
Refreshments, M. R. Jones . .		15 00	
"Revised Laws," Commonwealth of Massachusetts		6 00	
Stationery, printing, etc. : —			
City Messenger Department . .	$31 22		
Cambridge Chronicle Co. . .	296 75		
Cotton & Gould	37 95		
J. A. Cummings Printing Co. .	12 91		
Library Bureau	11 25		
Sundry persons	2 00		
		392 08	
Sundries		19 07	
Telephone rent and tolls . . .		249 51	
Use of horse, Whiting & Prescott .		33 50	
Wagon repairs, Chas. Waugh & Co. .		26 65	
Total			4,989 03
Surplus of Appropriation relinquished to General Treasury			$10 97

SMALL-POX HOSPITAL.

Appropriation	$9,000 00
Additional appropriation	37,600 00
	$46,600 00

EXPENDED.

For Advertising : —			
Boston Herald Co.	$7 00		
Boston Traveler Co. . . .	3 50		
Cambridge Chronicle Co. . .	21 38		
Cambridge Democrat . . .	22 50		
Cambridge Times	21 50		
Cambridge Tribune . . .	10 75		
Globe Newspaper Co. . . .	10 60		
F. S. Hill	13 75		
Press Newspaper Co. . . .	11 85		
		$122 83	
Attendance and maintenance for Mary Bergen : —			
John Gray		52 90	
Amounts carried forward . . .		$175 73	$46,600 00

HEALTH DEPARTMENT, SMALL-POX HOSPITAL — Continued.

Amounts brought forward		$175 73	$46,600 00
For board: —			
Bradford Milligan	$174 14		
Lucy Tremblay	20 50		
		194 64	
Burials, H. D. Litchfield		1,495 00	
Care of small-pox patients: —			
David D. Brough, M.D.	$4,800 00		
Consultations: —			
Chas. S. Wright, M. D.	30 00		
		4,830 00	
Carriage hire: —			
M. J. Fairbanks	$28 00		
J. E. Fabyan	5 00		
Whiting & Prescott	1,265 00		
Sundry persons	6 00		
		1,304 00	
Carpentry: —			
W. H. Norris	$210 06		
Sundry persons	2 60		
		212 66	
Car tickets: —			
Boston Elevated Railway Co.		50 00	
Cleaning vaults, H. G. Kennedy		85 00	
Clerical services, Blanche E. Calnan		110 00	
Clocks, Miller Bros.		7 00	
Clothing, etc.: —			
J. H. Corcoran & Co.	$732 15		
John V. Ferrie & Co.	15 50		
G. C. W. Fuller	112 00		
T. H. Lane & Co.	19 50		
R. M. O'Brien	10 00		
Rosenberg's Branch	35 05		
Sundry persons	75		
		924 95	
Clothing destroyed: —			
Gustina E. Gatchell	$13 45		
Emma M. Greip	40 10		
John A. Jackson	6 50		
R. M. O'Brien	7 00		
Gertrude Poindexter	40 50		
Sarah MacLeod	49 00		
Marie Sullivan	20 00		
Mary J. Wood	25 50		
		202 05	
Damages, John Murphy		100 00	
Disinfecting: —			
Wm. H. Bourne	$18 00		
Frank H. Spear	27 00		
		45 00	
Electric bells: —			
Holtzer-Cabot Electric Co.		6 30	
Examination of title: —			
Wm. V. Thompson		15 00	
Amounts carried forward		$9,757 33	$46,600 00

HEALTH DEPARTMENT, SMALL-POX HOSPITAL — Continued.

Amounts brought forward		$9,757 33	$46,600 00
For expressage and moving goods: —			
F. Davis	$10 00		
Peter P. Durnan	10 00		
Hatch & Co.	5 10		
J. R. Hersum & Co.	30 00		
Sundry persons	5 20		
		60 30	
Extinguisher, Boston Woven Hose Co.		10 00	
Fuel: —			
Metropolitan Coal Co.	$204 98		
J. T. Sullivan	14 88		
		219 86	
Furniture and furnishings: —			
G. W. Bent & Co.	$19 00		
J. Magee	5 50		
New York Department Store Co.	90 54		
Phillips Bros. & Co.	977 05		
		1,092 09	
Generators, The Ward Apparatus Co.		76 50	
Goods destroyed by fire: —			
Patrick E. O'Connell	$17 00		
Joseph C. Pierce	10 50		
		27 50	
Hardware, tools and supplies: —			
Brock & Eaton	$22 15		
E. T. Bynner	44 44		
New York Department Store Co.	20 67		
Simplex Electrical Co.	50 60		
Sundry persons	2 27		
		140 13	
Heating apparatus, J. Magee		18 25	
House on New street: —			
Patrick McQuiggan		3,500 00	
Household services: —			
Mary Bergen	$60 00		
Josephine Carey	15 00		
John Gray	64 28		
Michael J. McDonough	162 00		
Gertrude Poindexter	366 00		
Benjamin Sawyer	289 27		
Nelson Willis	675 28		
		1,631 83	
Ice, Cambridge Ice Co.		72 68	
Installing telephone line: —			
Electrical Department, Wire Account		18 00	
Laundry work: —			
Anna Duffus	$62 14		
Annie Graham	1,298 15		
		1,360 29	
Lumber, Geo. W. Gale Lumber Co.		99 53	
Making bags, Mrs. Arbuckle		7 20	
Amounts carried forward		$18,091 49	$46,600 00

HEALTH DEPARTMENT, SMALL-POX HOSPITAL — Continued.

Amounts brought forward		$18,091 49	$46,600 00
For medicines, drugs and supplies: —			
Billings & Stover	$56 15		
J. A. and W. Bird & Co.	102 01		
Cambridge Hospital	13 68		
Griswoldville Manufacturing Co.	146 85		
Harvard Co-operative Society	110 00		
Wm. B. Hunt & Co.	1,751 02		
E. H. La Pierre	1,862 79		
Geo. H. Mason & Co.	72 00		
Theodore Metcalf Co.	435 45		
New England Vaccine Co.	57 50		
John B. O'Hara	6 75		
Sundry persons	5 29		
		4,619 49	
Moving houses, H. S. Angus & Son		85 03	
Nurses: —			
Edwin B. Foster.	$1,225 00		
Gustina E. Gatchell	242 85		
Emma M. Greip	1,465 00		
Sarah MacLeod	1,040 00		
Agnes B. Scally	375 00		
Marie Sullivan	275 00		
Lucy Tremblay	15 00		
Mary J. Wood	1,408 57		
		6,046 42	
Oakum, H. L. Rose		6 50	
Plumbing, Levi Hawkes		8 61	
Rent, John F. O'Brien		28 00	
Rubber sheets and gloves: —			
Robert Josselyn		31 84	
Services taking possession of New street house: —			
A. M. Stewart		10 00	
Services taking possession of goods, etc.: —			
A. M. Stewart		11 30	
Services working overtime: —			
John A. Jackson		347 20	
Services at ward room: —			
Alexander Sutherland		9 00	
Stationery and printing: —			
Cambridge Chronicle Co.	$60 75		
J. L. Fairbanks & Co.	12 60		
Sundry persons	5 50		
		78 85	
Subscriptions, Geo E. French		16 90	
Subsistence supplies: —			
Cambridge Baking Co.	$35 86		
L. B. Chandler	710 82		
Amounts carried forward	$746 68	$29,390 63	$46,600 00

HEALTH DEPARTMENT, SMALL-POX HOSPITAL — Continued.

Amounts brought forward	$746 68	$29,390 63	$46,600 00
For J. F. Danskin	18 63		
Wm. T. Gibson	516 27		
M. R Jones	11 35		
F. X Masse	10 61		
Arthur Ward	763 91		
W. T. Warren	5 64		
J. U. Wescott	12 15		
F. C. Witherell	50 02		
Yerxa & Yerxa	1,838 44		
		3,973 70	
Sundries		8 80	
		$33,373 13	
Vaccinations: —			
Newton S. Bacon, M. D.	$270 50		
Wm J. Brousseau, M. D.	788 00		
Wm. H. Burke, M. D.	322 00		
Geo. S. Cahill, M. D.	240 00		
Frank F. Carr, M. D.	120 00		
Wm. H. Clancy, M. D	172 00		
Geo. P, Cogswell, M. D.	73 75		
E. A. Cunningham, M. D.	16 00		
J. Z. Currie, M. D.	339 00		
David C. Dow, M. D.	23 75		
Chas. Dudley, M. D.	120 00		
J. F. Fair, M D.	192 00		
Wm. E. Fleet, M. D.	543 00		
P. J. Fleming. M. D.	22 50		
J. L. Flynn, M. D.	624 00		
J. C. de Freitas, M. D.	233 00		
F. M. Gilman, M. D.	282 50		
F. J. Goodrich, M. D.	591 00		
I. Haines, M. D.	214 25		
Thos. H. Heaton, M. D	378 00		
Edwin Hixon, M. D.	116 00		
C. P. Holt, M. D.	25 00		
C. M. Hutchinson, M. D.	72 50		
Geo. W. Jones, M D.	160 50		
Harold W. Jones, M. D.	174 00		
P. F. Kelleher, M. D.	246 00		
Wm. C. Lane, M. D.	392 00		
C. J. P. Lucas, M. D.	396 50		
Geo. M. McCoy, Jr., M. D.	377 00		
Felix F. McGirr, M. D.	928 00		
Geo. F. McIntire, M. D.	964 00		
Ross McPherson, M. D.	283 00		
J. P. Nelligan, M. D.	919 00		
Geo E. Norton, M. D.	721 25		
Ambrose C. Saunders, M. D.	70 00		
J. R. Sennott, M. D	72 00		
N. V. Shannon, M. D.	27 50		
Walter J. Webb, M. D.	439 50		
C. T. Weeks, M. D.	5 00		
R. Wetherbee, M. D.	3 75		
J. J. Whoriskey, M. D.	616 00		
		12,573 75	
Assisting: —			
Wm. R. Acheson	$70 50		
John J. McCarthy	28 00		
Amounts carried forward	$98 50	$45,946 88	$46,600 00

HEALTH DEPARTMENT, SMALL-POX HOSPITAL — Concluded.

Amounts brought forward . .	$98 50	$45,946 88	$46,600 00
For John McCormick	44 00		
Viola M. Ripley	16 00		
		158 50	
Voting Booths, Election Expenses, "Superintendent of Buildings" .		884 00	
Wagon and ambulance repairs, Chas. Waugh & Co.		18 30	
Total			47,007 68
Excess of Expenditures over Appropriations . .			407 68
Transfer to this Department from Contingent Fund .			500 00
Balance relinquished to General Treasury . . .			$92 32

TEMPORARY HOSPITAL.

Appropriation			$10,000 00
EXPENDED.			
For salaries of: —			
Physician, David C. Dow . .	$1,242 74		
Matron, Mildred Sanborn . .	916 40		
Nurses	2,537 40		
Cooks	312 00		
Houseman, James J. Reagan . .	728 00		
House-servants	247 14		
Laundresses	315 16		
		6,298 84	
Carpentry, W. H. Norris . . .		15 43	
Clothing and dry goods: —			
Geo. A. Odiorne Coat Co. . .	$12 00		
Jordan, Marsh Co.	171 86		
		183 86	
Expressage and moving furniture: —			
Sundry persons		4 55	
Fuel, Metropolitan Coal Co. . .		186 85	
Furniture, furnishings and household supplies: —			
G. W. Bent & Co.	$121 50		
Jordan, Marsh Co.	156 12		
Paine Furniture Co. . . .	26 50		
Sundry persons	4 50		
		308 62	
Hardware, tools and supplies: —			
Brock & Eaton	$32 19		
Sundry persons	30		
		32 49	
Heating apparatus and repairs: —			
D. J. Wild & Co.		22 85	
Ice, Fresh Pond Ice Co. . . .		57 28	
Lighting, Cambridge Gas Light Co. .		119 60	
Amounts carried forward . . .		$7,230 37	$10,000 00

HEALTH DEPARTMENT, TEMPORARY HOSPITAL — Concluded.

Amounts brought forward		$7,230 37	$10,000 00
For medical apparatus and supplies: —			
Griswoldville Mfg. Co.	$296 10		
J. A. E. Sellar	40 75		
		336 85	
Medicines, drugs, etc: —			
American Oxygen Association	$5 00		
Theodore Metcalf Co.	11 50		
John Toye	331 50		
		348 00	
Paint, etc., W. J. Edwards		18 58	
Professional services: —			
A. W. Dudley, M. D.	$10 00		
J. T. G. Nichols, M. D.	5 00		
		15 00	
Stationery, Sundry persons		5 77	
Subsistence supplies: —			
Wm. T. Gibson	$354 48		
Alexander Millan	77 65		
W. W. Seavey	738 38		
Chas. O. Stickney	321 42		
Yerxa & Yerxa	500 53		
		1,992 46	
Sundries		1 50	
Telephone rent and tolls		51 05	
Total			9,999 58
Surplus of Appropriation relinquished to General Treasury			42

INSPECTION OF MILK AND VINEGAR. (2.4)

SALARIES.

Appropriation	$1,360 00

EXPENDED.

For salaries of: —			
Inspector, Philip P. Sharples		$900 00	
Deputy, J. F. Wheeler		443 31	
Total			1,343 31
Surplus of Appropriation			$16 69
Transfer from this Department to General Expense			12 00
Balance relinquished to General Treasury			$4 69

GENERAL EXPENSES. (2.4)

Appropriation	$320 00

DEPARTMENT RECEIPTS. CARRIED TO GENERAL TREASURY.

For Milk licenses (10.6)	$145 50

EXPENDED.

For car tickets: —			
Boston Elevated Railway Co.		$25 00	
Chemicals: —			
E. & F. King & Co.	$17 33		
Theodore Metcalf Co.	5 70		
		23 03	
Dishes and apparatus: —			
Eimer & Amend		202 46	
Printing: —			
Cambridge Chronicle Co.	$58 50		
J. A. Cummings Printing Co.	6 91		
		65 41	
Sundries		15 07	
Total			330 97
Excess of Expenditures over Appropriation			$10 97
Transfer to this Department from Salaries			12 00
Balance relinquished to General Treasury			$1 03

INSPECTION OF PROVISIONS, ETC. (2.4)

Appropriation	$800 00

EXPENDED.

For Salary of: —			
Inspector of Provisions: —			
C. E. Hadcock		$700 00	
Drugs, etc.: —			
Walter A. Claflin	$59 35		
A. Cunningham	17 65		
		77 00	
Total			777 00
Surplus of Appropriation relinquished to General Treasury			$23 00

INTEREST.

Appropriation		$169,469 00

DEPARTMENT RECEIPTS. CARRIED TO GENERAL TREASURY.

For Accrued interest (9.4)	$528 50	
Interest on deposits (9.1)	3,188 67	
" " sewer assessments (9.2)	77 18	
" " sidewalk " (9.2)	41 33	
" " taxes (9.2)	8,424 62	
	$12,260 30	

EXPENDED.

For Daniel White Charity (9.4)	$300 00	
Dowse Institute Fund (9.4)	600 00	
Funded loan (9.3)	154,769 00	
Sanders Temperance Fund (9.4)	600 00	
Temporary loans (9.3)	8,337 76	
Total		164,606 76
Surplus of Appropriation		$4,862 24
Transfers from this Department: —		
To Abatements, Taxes	$3,000 00	
" Park Department, Interest	1,000 00	
		4,000 00
Balance relinquished to General Treasury		$862 24

LAND DAMAGES. (4.2)

Appropriation	$35,497 32
Additional appropriation	1,800 00
" "	5,200 00
	$42,497 32

EXPENDED.

For Appraising: —			
E. W. Boynton	$30 00		
W. Fillmore	65 00		
		$95 00	
Examining titles: —			
Augustine J. Daly	$30 00		
Wm. V. Thompson	75 00		
		105 00	
Recording deeds, E. O. Childs		17 26	
Aberdeen Avenue: —			
Land and damage: —			
John C. Gray		10,027 58	
Belmont Street: —			
Land and damage: —			
Frank H. Chamberlain	$155 00		
Mary Hogan	7,000 00		
Knights et al., executors	1,100 00		
Chas. M. Miller	689 20		
Amounts carried forward	$8,944 20	$10,244 84	$42,497 32

LAND DAMAGES — Concluded.

Amounts brought forward . .	$8,944 20	$10,244 84	$42,497 32
For Annie M. Mulrey	180 00		
Mary A. C. Neill	643 20		
Richard M. Orr	1,000 00		
Helena J. Quinn	1,885 00		
Alice M. Thompson . . .	1,056 80		
		13,709 20	
Brookline Street: —			
Land and damage: —			
Norcross Bros.		1,800 00	
Clark Street: —			
Land and damage: —			
Joseph McIntire		5,500 00	
Dudley Street: —			
Land and damage: —			
Patrick Mara		31 75	
Eighth Street: —			
Land and damage: —			
Herman L. Hoffman . . .		50 00	
Franklin Street: —			
Land and damage: —			
Wm. G. Miller		23 40	
Inman Court: —			
Land and damage: —			
John J. Bright		2,135 95	
Pleasant Street: —			
Land and damage: —			
Heirs of Isaac Tufts . . .		1,411 20	
Portland Street: —			
Land and damage: —			
Almira S. Johnson . . .	$350 00		
Edw. T. Sennott	100 00		
		450 00	
Wyeth Street: —			
Land and damage: —			
John D'Arcy		242 90	
Total			35,599 24
Surplus of Appropriations carried to General Treasury			$6,898 08

LAW DEPARTMENT. (1.3)

SALARIES AND CLERICAL ASSISTANCE.

Appropriation		$4,300 00
EXPENDED.		
For salaries of: —		
City Solicitor, G. A. A. Pevey . .	$3,500 00	
Amounts carried forward . . .	$3,500 00	$4,300 00

LAW DEPT., SALARIES AND CLERICAL ASSISTANCE — Concluded.

Amounts brought forward . .	$3,500 00	$4,300 00
For stenographers: —		
Henry P. Jones	832 50	
Avis V. Fowler	10 00	
Viola M. Ripley	5 00	
Total		4,347 50
Excess of Expenditures over Appropriation . .		$47 50
Transfer to this Department from Contingent Fund .		50 00
Balance relinquished to General Treasury . . .		$2 50

GENERAL EXPENSES.

Appropriation $700 00

DEPARTMENT RECEIPTS. CARRIED TO GENERAL TREASURY.

For rebate on bill, C. E. Hadcock .	$25 00	
Services of City Solicitor: —		
Water Works Department . .	500 00	
	$525 00	

EXPENDED.

For car tickets: —			
Boston Elevated Railway Co. .		$100 00	
Cash expended for sundries: —			
G. A. A. Pevey		73 51	
Copies of manuscripts: —			
Middlesex County		15 00	
Manilla wallets, Jewell & Co. . .		7 00	
"Municipal Corporation Cases"			
The Michie Co. . . .		10 00	
Photographs and prints: —			
Whitney & Son		16 00	
Plaster work, Wm. J. Heron . .		12 25	
Rent of Boston office,			
G. A. A. Pevey		250 00	
"Revised Laws," Commonwealth of			
Massachusetts		6 00	
Services: —			
C. E. Hadcock.		30 00	
Services as witnesses: —			
John F. Gurry	$5 00		
L. Albert Smith	5 00		
		10 00	
Amounts carried forward . . .		$529 76	$700 00

LAW DEPARTMENT, GENERAL EXPENSES — Concluded.

Amounts brought forward . .		$529 76	$700 00
For serving notices, summons, etc: —			
M. Frank Eastman	$5 16		
Walter C. Wardwell . . .	14 04		
Sundry persons	2 94		
		22 14	
Stationery, printing and typewriter supplies: —			
T. H. Ball	$35 24		
City Messenger Department . .	34 37		
Geo. E. Crosby	22 00		
		91 61	
Subscription: —			
The Review & Record Co. . .		5 00	
Sundries		3 00	
Telephone rent and tolls . . .		32 00	
Typewriter repairs: —			
Smith Premier Typewriter Co. .		15 00	
Total			698 51
Surplus of Appropriation relinquished to General Treasury . .			$1 49

OVERSEERS OF THE POOR DEPARTMENT. (3.4)

CITY HOME. SALARIES.

Appropriation			$7,500 00
EXPENDED.			
For salaries of: —			
Superintendent, M. L. Eldridge .	$1,500 00		
Assist. Superintendent, S. F. Norris	782 14		
Sundry house employees . . .	4,913 20		
Nurse, Abbie A. Smith . . .	35 00		
Organist, C. M. Walker . . .	100 00		
		$7,330 34	
Labor: —			
Wm. Clark	$16 50		
Michael Martin	119 93		
		136 43	
Total			7,466 77
Surplus of Appropriation relinquished to General Treasury			$33 23

CITY HOME. GENERAL EXPENSES.

Appropriation			$11,500 00
DEPARTMENT RECEIPTS. CARRIED TO GENERAL TREASURY.			
For Aid	$9 82		
Barrels	21 26		
Amounts carried forward . . .	$31 08		$11,500 00

OVERSEERS OF THE POOR DEPARTMENT, CITY HOME, GENERAL EXPENSES — Continued.

Amounts brought forward	$31 08		$11,500 00
For board	759 12		
Burials	57 75		
Grease and bones	51 51		
Rags	5 38		
	$904 84		
EXPENDED.			
For Advertising and printing: —			
Boston Herald Co.	$16 50		
Sundry persons	1 65		
		$18 15	
Board and care at: —			
Cambridge Hospital	$90 00		
Carney Hospital	17 15		
		107 15	
Boots, shoes and repairs: —			
Wm. Myers	$72 10		
Smith, Bennett & Co.	10 00		
A. G. Swett	67 55		
Sundry persons	3 35		
		153 00	
Burials, H. D. Litchfield		43 05	
Burial fees: —			
Cemetery Department	$40 00		
Mt. Auburn Catholic Cemetery	3 00		
		43 00	
Carpets, John H. Pray & Sons Co.		20 65	
Car tickets: —			
Boston Elevated Railway Co.		60 00	
Cash expended, M. L. Eldridge: —			
Care of babies	$4 00		
Cash to inmates	49 45		
Fruit and vegetables	6 73		
Help in hospital	8 00		
Postage	10 00		
Services of clergymen	96 00		
Sundries	25 70		
		199 88	
Clothing, dry goods and bedding: —			
Brown, Durrell & Co.	$288 83		
Burton, Pierce Co.	81 00		
Jordan, Marsh Co.	146 36		
Massachusetts State Prison	90 00		
L. Morse & Co.	50 50		
North, Fiske & Co.	17 50		
Sundry persons	3 25		
		677 44	
Disinfectants: —			
J. F. Fuller & Co	$12 00		
India Alkali Works	16 92		
		28 92	
Expressage, Bancroft's Express		23 40	
Amounts carried forward		$1,374 64	$11,500 00

OVERSEERS OF THE POOR DEPARTMENT, CITY HOME, GENERAL EXPENSES — Continued.

Amounts brought forward . .		$1,374 64	$11,500 00
For extinguishers, E.B.Badger & Sons Co.		31 50	
Fuel, Metropolitan Coal Co. . .		1,318 01	
Furniture, furnishings and household supplies: —			
R. N. Burnes	$6 50		
French, Mitchell, Woodbury Co. .	23 48		
Greenwood & Co.	19 87		
Jordan, Marsh & Co. . . .	60 65		
J. H. Pray & Sons Co . . .	66 02		
Worcester Bros.	10 94		
Sundry persons	7 45		
		194 91	
Grain, Clark Bros.		5 86	
Hardware, tools and repairs, and supplies: —			
E. T. Bynner	$68 62		
Albert B. Low	24 65		
Morss & Whyte	20 99		
Walworth Manufacturing Co. .	24 70		
Sundry persons	4 95		
		143 91	
House repairs: —			
Carpentry, etc.: —			
James Keefe	$192 00		
John F. Quinn	115 00		
Heating apparatus repairs: —			
D. W. Gage	20 51		
Walker & Pratt Mfg. Co. . .	17 18		
Mason work: —			
J. F. Brosnahan	7 25		
Painting, glazing, etc.: —			
A. W. Hastings & Co. . .	9 95		
Plastering: —			
Clarence G. Reed . . .	62 10		
Plumbing: —			
W. Haley	44 55		
John H. Stevens & Co. . .	78 55		
Roof repairs: —			
John J. Blevins	16 44		
Sundry repairs	4 40		
Windows, A. W. Hastings & Co. .	21 60		
		589 53	
Ice, Cambridge Ice Co. . . .		163 95	
Amounts carried forward . . .		$3,822 31	$11,500 00

OVERSEERS OF THE POOR DEPARTMENT, CITY HOME, GENERAL EXPENSES — Continued.

Amounts brought forward . .		$3,822 31	$11,500 00
For lighting: —			
Cambridge Gas Light Co. . .	$202 70		
Cambridge Electric Light Co. .	50		
		203 20	
Lumber, lime and cement: —			
Geo W. Gale Lumber Co. . .		249 45	
Medicines, drugs and chemicals: —			
Elie H. La Pierre		189 43	
Medical and surgical apparatus and instruments: —			
Harvard Co-operative Society .	$12 50		
W. H. Phelps & Co. . . .	6 00		
Sundry persons	75		
		19 25	
Oils, paints, etc.: —			
Wood Bros.	$13 99		
W. A. Wood Co.	16 54		
		30 53	
Plants, seeds etc.: —			
Wm. A. Bock	$11 25		
Schlegel & Fottler	12 62		
Sundry persons	2 25		
		26 12	
Professional services: —			
J. L. Hildreth, M.D. . . .		10 00	
Rent, Mercantile Wharf Corporation		40 00	
Soap and powder: —			
India Alkali Works . . .	$21 33		
Ray Drug and Chemical Co. . .	9 60		
Chas. R. Teele	100 00		
		130 93	
Stationery, printing, etc.: —			
Cotton & Gould		9 67	
Subscriptions, Jas. W. Hunnewell .		24 00	
Subsistence supplies: —			
Boston Packing & Provision Co. .	$83 20		
Bowman & Vaughan . . .	113 39		
Boyd, Dalton & Co. . . .	145 13		
Brown, De Loriea & Co. . .	56 62		
Henry Callender & Co . . .	71 20		
Willard N. Chamberlain . . .	73 09		
Geo. H. Chessman & Co. . .	30 40		
Clark Bros	6 25		
The Geo Close Co. . . .	15 14		
Cobb, Bates & Yerxa . . .	349 76		
Eastern Salt Co.	26 20		
R. S. Edwards & Co. . . .	170 00		
David Ellis & Co.	78 86		
John Groves & Co.	45 96		
Amounts carried forward . . .	$1,265 20	$4,754 89	$11,500 00

OVERSEERS OF THE POOR DEPARTMENT, CITY HOME, GENERAL EXPENSES — Concluded.

Amounts brought forward . .	$1,265 20	$4,754 89	$11,500 00
For Haskell, Adams & Co. . . .	42 39		
Chas. F. Hathaway . . .	46 52		
J. A. Hathaway & Co. . . .	1,878 43		
Home Mills Cereal Co. . . .	30 00		
Walter H. Keith, Son & Co. . .	12 00		
Francis P. Kendall	8 00		
Kennedy Biscuit Works . .	10 70		
L. L. Kimball & Co. . . .	19 88		
A. J. Littlefield & Co. . . .	468 56		
Isaac Locke & Co.	6 38		
A. J. Lovell & Co.	91 24		
McPherson Bros.	12 00		
Middlesex Produce Co. . . .	7 50		
Chas. E. Moody & Co. . . .	28 25		
National Biscuit Co. . . .	21 98		
Nelson, Morris & Co. . . .	39 00		
Fred D. Norton	339 52		
Oakdale Manufacturing Co. . .	171 00		
Old Colony Compressed Yeast Co.	32 49		
Oriental Tea Co.	6 75		
A. G. Patch & Co.	20 54		
J. H. Pierce & Co.	74 81		
Puffer Bros.	7 60		
F. Putnam & Co.	264 01		
Geo. E. Richardson & Co. . .	15 75		
Rogers & Sullivan Co. . . .	86 13		
Sands, Taylor & Wood . . .	242 00		
Frederick C. Small & Co. . .	142 25		
H. W. Spurr Coffee Co. . . .	126 91		
Wm. B. Stearns	24 00		
Swan, Newton & Co. . . .	135 98		
W. T. Warren	11 01		
David Whiting & Sons . . .	966 26		
Sundry persons	5 45		
		6,660 49	
Sundries		26 25	
Telephone, rent and tolls . . .		52 65	
Total			11,494 28
Surplus of Appropriation relinquished to General Treasury			$5 72

FARM. LABOR.

Appropriation			$4,200 00
EXPENDED			
For labor on farm: —			
Farmer, Jas. Walsh		$780 00	
Employees		3,794 23	
Total			4,574 23
Excess of Expenditures over Appropriation . .			$374 23
Amount carried forward . . .			$374 23

OVERSEERS OF THE POOR DEPARTMENT, FARM LABOR—Concluded.

Amount brought forward . .		$374 23
Transfers to this Department:—		
From Overseers of the Poor Department, Farm Supplies	$100 00	
From Contingent Fund	290 00	
		390 00
Balance relinquished to General Treasury . . .		$15 77

FARM. SUPPLIES.

Appropriation	$800 00

DEPARTMENT RECEIPTS. CARRIED TO GENERAL TREASURY.

For farm produce	$5,095 76
Ledge	2 61
	$5,098 37

EXPENDED.

For Cover for wagon, Geo. T. Hamblen		$7 50
Hardware, tools and supplies:—		
Joseph Breck & Sons . . .	$91 94	
Sundry persons	2 25	
		94 19
Hay, grain, etc.:—		
Clark Bros.	$134 54	
S. C. Frost	45 43	
Edgar Wheeler	35 25	
Geo. R. Wheeler	20 30	
		235 52
Lathyarn, The Lincoln-Dillaway Co.		12 60
Lumber, Geo W. Gale Lumber Co. .		22 81
Manure, Street Department . .		160 00
Pigs:—		
N. C. Skilton	$40 00	
James W. Whalen	25 00	
T. G. Whiting	15 00	
		80 00
Plants, seeds, etc., Schlegel & Fottler		67 45
Wagon repairs, J. E. Fitzgerald .		12 60
Total		692 67
Surplus of Appropriation		$107 33
Transfer to Overseers of Poor Department, Farm. Labor		100 00
Balance relinquished to General Treasury . . .		$7 33

OVERSEERS OF THE POOR DEPARTMENT — Continued.

HOUSE OFFAL. LABOR. (4.9)

Appropriation		$22,500 00
EXPENDED.		
For labor as per pay rolls	$23,069 50	
Labor, Hugh Toomey	110 00	
Total		23,179 50
Excess of Expenditures over Appropriation		$679 50
Transfer to this Dept. from Contingent Fund		680 00
Balance relinquished to General Treasury		50

HOUSE OFFAL. GENERAL EXPENSES.

Appropriation			$4,500 00
DEPARTMENT RECEIPTS. CARRIED TO THE GENERAL TREASURY.			
For sale of house offal	$9,722 83		
EXPENDED.			
For brushes, combs, etc., Greenwood & Co.		$28 30	
Disinfectants: —			
C. W. Lerned & Co.	$24 60		
P. Sutherland & Co.	9 20		
Sundry persons	1 15		
		34 95	
Electrical work, F. Bryant & Co.		48 33	
Grease, P. Sutherland & Co.		14 60	
Hardware, tools and repairs: —			
Dodge, Haley & Co.		19 10	
Harness and repairs and horse clothing: —			
Sartwell, Heinhold & Humphrey	$36 00		
Joseph A. Ryan	126 57		
		162 57	
Hay, grain, straw, etc.: —			
Clark Bros.	$1,589 92		
J. Cushing & Co.	2,100 77		
W. S. Leavitt & Co.	79 92		
L. G. Stone	22 50		
		3,793 11	
Horses, Welch & Hall Co.		185 00	
Horseshoeing: —			
Wm. Bell	$210 80		
E. P. Griffin	245 25		
		456 05	
Labor, Hugh Toomey		10 00	
Lighting, Cambridge Elec. Light Co.		21 74	
Lumber, Geo. W. Gale Lumber Co.		22 55	
Amounts carried forward		$4,796 30	$4,500 00

OVERSEERS OF THE POOR DEPARTMENT, HOUSE OFFAL, GENERAL EXPENSES — Concluded.

Amounts brought forward . .		$4,796 30	$4,500 00
For oil, paints, etc. : —			
P. Sutherland & Co. . . .	$6 25		
Wood Bros.	32 20		
		38 45	
Sundries		4 00	
Wagon repairs : —			
J. E. Fitzgerald	$197 05		
James A. Hickey	81 40		
A. S. Lohnes & Co.	16 10		
Geo. Patterson	7 00		
		301 55	
Total			5,140 30
Excess of Expenditures over Appropriation . .			$640 30
Transfer to this Department from Contingent Fund .			655 00
Balance relinquished to General Treasury . . .			$14 70

OUTSIDE AID, SALARIES AND CLERICAL ASSISTANCE. (3.5)

Appropriation			$3,600 00
EXPENDED.			
For salaries of :—			
Secretary, D. P. Muzzey . . .		$1,500 00	
Agent, H. K. Estabrook . . .		1,200 00	
Driver, M. J. O'Reagan . . .		354 00	
Clerk, Addie M. Benson . . .		630 25	
Total			3,684 25
Excess of Expenditures over Appropriation . .			$84 25
Transfer to this Department from Overseers of the Poor Department, Outside Aid. General Expense			100 00
Balance relinquished to General Treasury . . .			$15 75

OUTSIDE AID. GENERAL EXPENSES. (3.2–3.5)

Appropriation			$46,400 00
DEPARTMENT RECEIPTS. CARRIED TO GENERAL TREASURY.			
For Aid	$198 33		
Board	1,629 68		
Book case	10 00		
Book stand	7 00		
Burials	113 60		
Groceries	12 78		
Medical Aid	59 95		
Amounts carried forward . . .	$2,031 34		$46,400 00

OVERSEERS OF THE POOR DEPARTMENT, OUTSIDE AID, GENERAL EXPENSES — Continued.

Amounts brought forward . .	$2,031 34		$46,400 00
For shoes	20 00		
Support	1,626 89		
Sundries	14 41		
	$3,692 64		

EXPENDED.

For Aid to sundry persons as per payroll		$541 00	
By cities and towns: —			
City of Boston	$1,524 54		
City of Chelsea	83 00		
City of Everett	192 89		
City of Gloucester	5 00		
City of Haverhill	101 60		
City of Lowell	27 25		
City of Malden	62 50		
City of Melrose	9 43		
City of Somerville	632 90		
Sundry cities	3 64		
Town of Athol	145 13		
Town of Brookline	100 00		
Town of Cohasset	90 23		
Town of Douglass	11 00		
Town of Hudson	116 60		
Town of Whitman	142 72		
		3,248 43	
Ambulance fees: —			
Chas. W. Dailey	$16 00		
Police Department	123 00		
		139 00	
Binding: —			
E. W. Bettinson	$6 00		
Wm. E. Toner	59 05		
		65 05	
Board and care by Commonwealth of Massachusetts at: —			
Danvers Insane Hospital . .	$457 79		
State Farm	15 43		
State Hospital, Pauper . . .	881 55		
Westboro Insane Hospital . .	204 76		
Worcester Insane Hospital . .	177 63		
Rebate on bill	4 15		
		1,741 31	
Board and care at: —			
Cambridge Hospital . . .	$268 03		
Carney Hospital	458 57		
The Children's Hospital . . .	6 85		
The Convalescent Home . . .	50 00		
Mrs. Albert C. Crane's . . .	54 00		
Danvers Insane Hospital . .	1,242 43		
Bessie A. Dinsmore's . . .	20 00		
Miss L. Gray's	2 50		
Chester D. Holmes' . . .	99 22		
Amounts carried forward . . .	$2,201 60	$5,734 79	$46,400 00

OVERSEERS OF THE POOR DEPARTMENT, OUTSIDE AID, GENERAL EXPENSES — Continued.

Amounts brought forward	$2,201 60	$5,734 79	$46,400 00
For Hospital Cottages for Children	398 79		
Mass. Hospital for Dipsomaniacs	626 20		
Mass. Hospital for Epileptics	1,566 19		
Mass. School for Feeble-Minded	2,611 54		
Mass. State Sanatorium	119 49		
Leila McDonald's	10 50		
Medfield Insane Asylum	7,126 75		
Northampton Insane Hospital	169 46		
Thos. F. Smith's	183 85		
Somerville Hospital	34 29		
Mrs. Geo. H. Sweet's	169 46		
Taunton Insane Hospital	202 26		
Westboro Insane Hospital	2,808 01		
Worcester Insane Asylum	3,150 65		
Worcester Insane Hospital	9,819 87		
		31,198 91	
Burial fees, Cemetery Department		53 00	
Burials, H. D. Litchfield		79 25	
Carpentry, W. H. Norris		9 92	
Carriage hire: —			
M. J. Fairbanks	$7 50		
Whiting & Prescott	2 00		
		9 50	
Carriage repairs, J. E. Fitzgerald		58 45	
Car tickets: —			
Boston & Maine R. R.	$17 25		
Boston Elevated Railway Co.	300 00		
		317 25	
Cash expended: —			
H. K. Estabrook	$11 42		
D. P. Muzzey	50		
		11 92	
Collars, The Children's Hospital		7 50	
Directories: —			
W. A. Greenough & Co.	$37 25		
L. Lemon	7 50		
H. M. Meek Publishing Co.	5 00		
F. H. Radford	7 50		
Sampson, Murdock & Co.	6 00		
Sundry persons	2 75		
		66 00	
Disinfectant, Puritan Germicide Co.		13 50	
Files, The Fred Macey Co.		46 95	
Furniture and bedding: —			
Wm. R. Adams	$5 00		
V. O. Kalberg	7 00		
Sundry persons	6 50		
		18 50	
Ice, Fresh Pond Ice Co.		21 10	
Lighting: —			
Cambridge Elec. Light Co.	$16 58		
Cambridge Gas Light Co.	11 00		
		27 58	
Lock set, etc., Chelmsford Foundry Co.		8 50	
Amounts carried forward		$37,682 62	$46,400 00

OVERSEERS OF THE POOR DEPARTMENT, OUTSIDE AID, GENERAL EXPENSES — Continued.

Amounts brought forward . .		$37,682 62	$46,400 00
For medicines, drugs, etc. : —			
Wm. H. Frazier	$5 13		
E. C. Gove	18 32		
Elie H. La Pierre	153 99		
E. H. Patten	9 45		
Sundry persons	7 64		
		194 53	
Medical and surgical apparatus and instruments, sundry persons .		5 95	
Moving telephone, N. E. Telephone Co.		5 51	
Painting etc. : —			
J. H. & J. P. Thayer & Co. . .		15 00	
Postage, sundry persons . . .		5 50	
Professional services : —			
R. Wetherbee, M.D. . . .		90 00	
Repairing furniture : —			
David Thomson	8 25		
Sundry persons	2 00		
		10 25	
"Revised Laws" Commonwealth of Massachusetts		6 00	
Services as attendants : —			
John T. Cook	$16 00		
Warren H. Dow	10 00		
John McCauley	10 00		
George W. Sherman . . .	8 00		
Ellen S. Stewart	6 00		
Sundry persons	6 00		
		56 00	
Services as nurse : —			
Wm Winningham		4 00	
Stationery, printing and typewriter supplies : —			
F. W. Barry. Beale & Co. . .	$32 95		
Cotton & Gould	177 72		
J. A. Cummings Printing Co. .	65 70		
F. S. Webster Co.	5 90		
Sundry persons	2 35		
		284 62	
Stenography and typewriting : —			
Wm. L. Haskel		102 00	
Subsistence supplies : —			
Boston Packing & Provision Co. .	$23 00		
Boyd, Dalton & Co . . .	38 51		
R. S. Edwards & Co. . .	109 04		
McPherson Bros.	108 00		
F. Putnam & Co.	36 00		
Frederick C. Small & Co. . .	22 96		
Amounts carried forward . .	$337 51	$38,461 98	$46,400 00

OVERSEERS OF THE POOR DEPARTMENT, OUTSIDE AID, GENERAL EXPENSES — Concluded.

Amounts brought forward . .	$337 51	$38,461 98	$46,400 00
For H. W. Spurr Coffee Co. . . .	9 50		
Sundry persons	7 35		
		354 36	
Sundries		12 55	
Telephone rent and tolls . . .		125 97	
Typewriters: —			
Hammond Typewriter Co. . .		60 50	
Total			39,015 36
Surplus of Appropriation			$7,384 64
Transfers from this Department: —			
To Outside Aid, Salaries, and Clerical Assistance .		$100 00	
" Contingent Fund		7,000 00	
			7,100 00
Balance relinquished to General Treasury . . .			$284 64

SALARY OF CITY PHYSICIAN. (3.5)

Appropriation	$1,500 00

EXPENDED.

For salary of City Physician: —	
Dr. Lewis L. Bryant . . .	$1,500 00

PARK DEPARTMENT.

CONSTRUCTION. (7.2)

Appropriation	$56,322 89

DEPARTMENT RECEIPTS. CARRIED TO GENERAL TREASURY.

For rent	$1,023 80
Stakes	60
	$1,024 40

EXPENDED.

For Cambridge Field: —			
Filling, sundry persons . . .		$148 52	
Pay rolls: —			
Engineers . . .	$52 87		
Laborers	117 50		
		170 37	
Teaming, sundry persons		44 63	
Total expenses, Cambridge Field . . .		363 52	
Amounts carried forward . . .		$363 52	$56,322 89

PARK DEPARTMENT, CONSTRUCTION — Continued

Amounts brought forward . .			$363 52	$56,322 89
East Cambridge Embankment: —				
Filling, Thos. Brennan . . .		$ 30		
Pay rolls, engineers		3 62		
Total expenses, East Cambridge Embankment			3 92	
General Account: —				
Salary of General Supt. of Parks, H. E. Whiting	$1,166 64			
Salary of Acting General Supt. of Parks, J. A. Holmes .	524 00			
		$1,690 64		
Bicycle repairs, J. L. Moseley . .		14 05		
Car tickets: —				
Boston Elevated Railway Company		150 00		
Execution of Court, Alice Callahan .		400 00		
Hardware, tools and repairs, and supplies: —				
Mark Alexander . .	$5 50			
E. T. Bynner . . .	12 48			
James Maitland . .	11 80			
Morss & Whyte . .	6 00			
Sundry persons . .	13 51			
		49 29		
Heliotype illustrations: —				
Heliotype Printing Co. . . .		126 00		
Horse board, Whiting & Prescott .		300 00		
Horseshoeing, W. F. Garrett . .		31 00		
Photograph supplies: —				
H. F. Kimball . . .	$17 70			
Sundry persons . .	8 21			
		25 91		
Plants, seeds, etc.: —				
Jos. Breck & Sons		14 32		
Refreshments, Colonial Club . .		21 70		
Rent, The Prospect Union . .		110 00		
Rubber boots: —				
Franklin Rubber Co. . . .		13 82		
Services of landscape architects: —				
Olmsted Bros.		888 77		
Stakes, John Quin		12 00		
Stationery and printing: —				
Cambridge Chronicle Co.	$19 25			
J. A. Cummings Printing Co.	76 12			
		95 37		
Sundries		15 37		
Use of horse, Whiting & Prescott .		5 00		
Amounts carried forward . . .		$3,963 24	$367 44	$56,322 89

PARK DEPARTMENT, CONSTRUCTION — Continued.

Amounts brought forward	$3,963 24	$367 44	$56,322 89
For wagon and carriage repairs: —			
F. Ivers & Son	59 00		
Total expenses, General Account		4,022 24	
The Nursery: —			
Pay rolls, laborers	$697 00		
Sundries	6 39		
Total expenses, The Nursery		703 39	
The Office: —			
Salary of clerk, Grace E. Hixon	$690 00		
Book on horticulture, Chas E. Lauriat Co.	5 00		
"Revised Laws," Commonwealth of Massachusetts	6 00		
Stationery, printing and typewriting supplies: —			
Cambridge Chronicle Co. $89 00			
City Messenger Dept. 53 06			
Cotton & Gould 25 85			
Sundry persons 6 06			
	173 97		
Sundries	9 00		
Telephone, rent and tolls	112 20		
Total expenses, The Office		996 17	
Porter Square: —			
Pay rolls, engineers	$10 37		
Total expenses, Porter Square		10 37	
Rindge Field: —			
Expenses attending installation of playground apparatus: —			
Rindge Field Playground Committee	$50 00		
Pay rolls, laborers	316 80		
Teaming, sundry persons	3 00		
Total expenses, Rindge Field		369 80	
River Parkway, Section A: —			
Pay Rolls: —			
Engineers $62 75			
Laborers 25 34			
	$88 09		
Sundries	2 50		
Total expenses, Section A		90 59	
River Parkway, Section B: —			
Lawn seats: —			
Joseph Breck & Sons	$22 20		
Amounts carried forward	$22 20	$6,560 00	$56,322 89

PARK DEPARTMENT, CONSTRUCTION — Continued.

Amounts brought forward . .	$22 20	$6,560 00	$56 322 89
For laying artificial stone sidewalk: —			
Simpson Bros.	137 20		
Pay Rolls: —			
Engineers . . . $55 38			
Laborers . . . 2,307 67			
	2,363 05		
Plants, shrubs, etc.: —			
Shady Hill Nursery Co. . . .	170 70		
Repairing fence: —			
Jos. A. Reid	16 00		
Sundries	7 57		
Total expenses, Section B .		2,716 72	
River Parkway, Section C: —			
Filling, sundry persons . . .	$886 67		
Hardware, tools and supplies: —			
Joseph Breck & Sons . $7 20			
E. T. Bynner . . 9 68			
	16 88		
Land and damage: —			
Orlando W. Norcross, et al . .	20,352 34		
Lumber: —			
Sewer Dept. . . $4 57			
E. D. Sawyer & Co. . 22 01			
Wm. H. Wood & Co. . 133 44			
	160 02		
Pay rolls: —			
Engineers . . . $147 14			
Laborers . . . 825 48			
	972 62		
Putting down crossing: —			
Boston & Albany R. R. . . .	11 30		
Sundries	5 34		
Teaming, sundry persons . . .	150 00		
Total expenses, Section C .		22,555 17	
River Parkway, Section D: —			
Cracked Stone: —			
Waltham Trap Rock Co. . .	$1,064 46		
Filling, sundry persons . . .	563 50		
Freight, Boston & Maine R.R. . .	9 00		
Hardware, E. T. Bynner . . .	8 14		
Lumber: —			
E. D. Sawyer Lumber Co. $54 31			
Wm. H. Wood & Co. . 24 16			
	78 47		
Amounts carried forward . . .	$1,723 57	$31,831 89	$56,322 89

PARK DEPARTMENT, CONSTRUCTION — Continued.

Amounts brought forward	$1,723 57	$31,831 89	$56,322 89
For pay rolls: —			
Engineers	$646 90		
Laborers	2,310 30		
	2,957 20		
Stakes, John Quin	19 45		
Sundries	4 65		
Teaming, sundry persons	572 35		
Use of steam roller: —			
Street Department	313 00		
Total expenses, Section D		5,590 22	
River Parkway, Section E: —			
Pay rolls, engineers	$455 25		
Stakes, John Quin	4 20		
Total expenses, Section E		459 45	
River Parkway, Section F: —			
Advertising and printing: —			
Press Newspaper Co.	$30 95		
Bricks, N. E. Brick Co.	150 96		
Building drain outlets: —			
Eastern Dredging Co.	28 22		
Cement, John M. Riley	28 50		
Edgestones and circles: —			
S. & R. J. Lombard	$320 96		
Sweatt & Gould	214 76		
	535 72		
Filling, sundry persons	7,360 70		
Freight, Boston & Maine R. R.	6 12		
Grate and base, Concord Foundry Co.	97 50		
Lumber: —			
E. B. James Lumber Co.	$42 29		
E. D. Sawyer Lumber Co.	47 06		
	89 35		
Painting, J. L. P. Ackers	12 00		
Pay rolls: —			
Engineers	$1,225 84		
Laborers	5 539 96		
	6,765 80		
Piles: —			
Augustus Bellevue & Co.	110 00		
Pipe and fittings: —			
D. W. Lewis	$162 50		
Walworth Mfg. Co.	305 32		
Water Works Department	101 19		
	569 01		
Amounts carried forward	$15,784 83	$37,881 56	$56,322 89

PARK DEPARTMENT, CONSTRUCTION — Continued.

Amounts brought forward	$15,784 83	$37,881 56	$56,322 89
For plants, shrubs, seeds, etc.: —			
Joseph Breck & Sons $7 16			
Edward Gillett 31 84			
Shady Hill Nursery Co. 62 55			
T. R. Watson 13 60			
W. H. Wyman 32 00			
	147 15		
Posts and stone work: —			
James Brennan $4 00			
Austin Ford & Son 12 00			
	16 00		
Removing stone: —			
Eastern Dredging Co.	400 00		
Repairing gutter, Howard F. Peak	23 39		
Stakes, John Quin & Son	32 20		
Stock and labor, Water Works Dept.	15 41		
Sundries	11 58		
Teaming, sundry persons	266 20		
Tools and repairs, hardware and supplies: —			
Joseph Breck & Sons $22 10			
Sundry persons 3 00			
	25 10		
Traveling expenses, G. A. A. Pevey	7 00		
Use of steam roller, Street Dept.	31 50		
Total expenses, Section F		16,760 36	
River Parkway, Section H: —			
Bound posts: —			
Austin Ford & Son	$8 00		
Fences: —			
Cleveland Wrought Iron Fence Co. $44 60			
Van Dorn Iron Works 761 67			
	806 27		
Pay rolls: —			
Engineers $19 50			
Laborers 53 25			
	72 75		
Total expenses, Section H.		887 02	
Total		$55,528 94	

SUMMARY — EXPENDED.

For Cambridge Field	$363 52	
East Cambridge Embankment	3 92	
General Account	4,022 24	
The Nursery	703 39	
The Office	996 17	
Porter Square	10 37	
Amounts carried forward	$6,099 61	$56,322 89

PARK DEPARTMENT, CONSTRUCTION — Concluded.

Amounts brought forward . .	$6,099 61	$56,322 89
For Rindge Field	369 80	
River Parkway, Section A . . .	90 59	
" " " B . . .	2,716 72	
" " " C . . .	22,555 17	
" " " D . . .	5,590 22	
" " " E . . .	459 45	
" " " F . . .	16,760 36	
" " " H . . .	887 02	
Total		55,528 94
Surplus of Appropriation relinquished to General Treasury		$793 95

PARK DEPARTMENT, MAINTENANCE.

BATH HOUSE. (7.3)

Appropriation $2,500 00

EXPENDED.

For Employees: —			
Bath house keepers: —			
Joseph James	$176 00		
Ernest H. Sparrow . . .	109 71		
Assistant, W. W. Williams . .	100 85		
Life guards: —			
Channing S. Bullard . . .	121 72		
J. J. Sullivan	82 28		
Matrons: —			
Jennie Craig	67 14		
Francis G. Ells	57 15		
Police officers: —			
Thos F. Burke	104 25		
Jos. J Donahue	354 60		
Peter J. Murphy	90		
Temporary clerks: —			
Mary A. Crowley . .	80 00		
A. M. Donahue	111 41		
Laborers	324 55		
		1,690 56	
Cleaning vault, H. G. Kennedy . .		5 00	
Hardware, tools and repairs, and supplies: —			
E. T. Bynner	$75 22		
Sundry persons	5 76		
		80 98	
Hose, J. D. Jewett Co. . . .		27 00	
Laundering: —			
Monk's Custom Laundry . .		139 49	
Amounts carried forward . . .		$1,943 03	$2,500 00

PARK DEPARTMENT, MAINTENANCE, BATH HOUSE — Concluded.

Amounts brought forward		$1,943 03	$2,500 00
For lighting: —			
Cambridge Electric Light Co.		170 80	
Lumber: —			
E. D. Sawyer Lumber Co.	$18 33		
Wm. H. Wood & Co.	7 80		
		26 13	
Printing, Cambridge Chronicle Co.		26 50	
Sewing tags, sundry persons		47 63	
Stakes, John Quin & Son		9 00	
Sundries		11 12	
Tags, American Silk Label Mfg. Co.		30 00	
Telephone rent and tolls		27 77	
Total			2,291 98
Surplus of Appropriation			$208 02
Transfer from this Department to Shade Trees			200 00
Balance relinquished to General Treasury			$8 02

BROWN TAIL MOTH EXTERMINATION. (7.2)

Appropriation	$3,000 00

EXPENDED.

For Advertising	$14 85	
Hardware, tools and supplies	5 61	
Insecticide, Bowker Insecticide Co.	15 00	
Pay rolls, laborers	4,485 14	
Printing, Cambridge Chronicle Co.	37 50	
Sundries	1 30	
Teaming, sundry persons	123 75	
Use of tools, H. L. Frost & Co.	115 91	
Total		4,799 06
Excess of Expenditures over Appropriation		$1,799 06
Transfer from Contingent Fund		1,800 00
Balance relinquished to General Treasury		94

COMMONS, SQUARES AND PUBLIC GROUNDS. (7.2)

Appropriation	$5,600 00

EXPENDED.

For Ensign, Henry A. Wheeler		$11 62	
Filling, sundry persons		25 26	
Hardware, tools and supplies: —			
Jos. Breck & Sons	$64 21		
E. T. Bynner	8 34		
J. D. Jewett Co.	8 50		
		81 05	
Lighting: —			
Cambridge Electric Light Co.		390 00	
Amounts carried forward		$507 93	$5,600 00

PARK DEPARTMENT, MAINTENANCE, COMMONS, SQUARES AND PUBLIC GROUNDS — Concluded.

Amounts brought forward . .		$507 93	$5,600 00
For lumber, E. D. Sawyer Lumber Co.		125 24	
Painting, Woods Bros. & Co. . .		65 00	
Pay Rolls: —			
Engineers	$4 00		
Laborers	4,136 73		
		4,140 73	
Plants and bulbs: —			
Joseph Breck & Sons . . .	$9 20		
R. & J. Farquhar & Co. . . .	28 85		
P. O'Brien & Son	62 00		
		100 05	
Removing skeleton from flag-staff: —			
Wm. Bateman		10 00	
Sundries		12 91	
Teaming, sundry persons . . .		83 67	
Total			5,045 53
Surplus of Appropriation			$554 47
Transfer from this Department to Shade Trees . .			550 00
Balance relinquished to General Treasury . . .			$4 47

CAMBRIDGE FIELD AND SHELTER. (7.2)

Appropriation			$4,500 00
EXPENDED.			
For salaries of: —			
Superintendent, John Good . .	$912 86		
Janitor, G. J. Weber . . .	291 43		
Janitor's substitute, Edw. Flynn .	139 25		
Matron, Mrs. E. Reardon . .	507 14		
		$1,850 68	
Clothing, Oak Hall Clothing Co. .		6 00	
Fuel, Metropolitan Coal Co. . .		246 50	
Hardware, tools and repairs, and supplies: —			
E. T. Bynner	$33 24		
Wm. H. Claflin & Co. . . .	18 00		
Sundry persons	2 75		
		53 99	
Laundry work, E. & R. Laundry .		11 54	
Lighting: —			
Cambridge Electric Light Co. .		824 00	
Pay rolls: —			
Engineers	$1 50		
Laborers	1,986 29		
		1,987 79	
Plumbing, Greene & Co. . . .		7 94	
Amounts carried forward . .		$4,988 44	$4,500 00

PARK DEPARTMENT, MAINTENANCE, CAMBRIDGE FIELD AND SHELTER — Concluded.

Amounts brought forward . .	$4,988 44	$4,500 00
For stock and labor, Water Works Dept.	8 31	
Sundries	12 36	
Teaming, sundry persons . . .	14 46	
Telephone rent and tolls . . .	88 40	
Total		5,111 97
Excess of Expenditures over Appropriation . .		$611 97
Transfer to this Department from Contingent Fund .		650 00
Balance relinquished to General Treasury . . .		$38 03

GENERAL ACCOUNT. (7.2)

Appropriation	$400 00

DEPARTMENT RECEIPTS. CARRIED TO GENERAL TREASURY.

For Bath house (7.3)	$864 94	
Labor	79 46	
Pay rolls	31 80	
Sundries	3 55	
	$979 75	

EXPENDED.

For Bicycle repairs: —			
J. L. Moseley		$20 65	
Hardware, tools and supplies: —			
Jos. Breck & Sons	$52 76		
E. T. Bynner	16 21		
Sundry persons	8 10		
		77 07	
Harness and repairs, and horse clothing: —			
Jas. Forgie & Son		12 66	
Horse board, Street Department .		255 00	
Horseshoeing, Street Department .		14 70	
Plants, seeds, etc.: —			
Jos. Breck & Sons		14 32	
Sundries		4 88	
Total			399 28
Surplus of Appropriation relinquished to General Treasury			72

SECTIONS A, B, D, F AND RINDGE FIELD. (7.2)

Appropriation	$2,500 00

EXPENDED.

For Section A: —		
Lighting, Welsbach Street Light Co.	$220 39	
Amounts carried forward . . .	$220 39	$2,500 00

PARK DEPARTMENT, MAINTENANCE, SECTIONS A, B, D, F AND RINDGE FIELD — Concluded.

Amounts brought forward . .		$220 39	$2,500 00
For Section B : —			
Lighting, Welsbach Street Light Co.		1,007 52	
Section D : —			
Lighting, Welsbach Street Light Co.		775 89	
Section F : —			
Lighting, Welsbach Street Light Co.		162 20	
Rindge Field : —			
Lighting : —			
Cambridge Electric Light Co. .	$200 04		
Welsbach Street Light Co. .	68 16		
		268 20	
Total			2,434 20
Surplus of Appropriation relinquished to General Treasury			$65 80

SECTION G. (7.2)

Appropriation	$3,000 00

EXPENDED.

For Lighting, Welsbach Street Light Co.		$1,029 52	
Painting, J. L. P. Ackers . . .		88 00	
Pay rolls : —			
Engineers	$29 01		
Laborers	1,793 55		
		1,822 56	
Sundries		1 39	
Total			2,941 47
Surplus of Appropriation relinquished to General Treasury			$58 53

SHADE TREES. (7.2)

Appropriation	$5,500 00

EXPENDED.

For Carpentry : —			
W. Fillmore & Co.	$18 75		
Sundry persons	5 18		
		$23 93	
Disparene : —			
Bowker Insecticide Co. . . .		63 00	
Filling, sundry persons . . .		28 67	
Amounts carried forward . . .		$115 60	$5,500 00

PARK DEPARTMENT, MAINTENANCE, SHADE TREES — Concluded.

Amounts brought forward		$115 60	$5,500 00
For hardware, tools, and repairs, and supplies: —			
Jos. Breck & Sons	$280 68		
E. T. Bynner	13 71		
J. D. Jewett Co.	15 41		
James Maitland	10 25		
Daniel J. Sullivan	28 20		
Sundry persons	10 65		
		358 90	
Ladders, C. W. H. Moulton & Co.		14 50	
Lumber and mill work: —			
Wm. H. Wood & Co.		7 23	
Pay rolls, laborers		5,110 79	
Poles, Boston Flag Pole Co.		35 00	
Printing, Cambridge Chronicle Co.		8 25	
Raising stump of tree: —			
H. S. Angus & Son		16 00	
Spraying trees, H. L. Frost & Co.		9 17	
Sundries		12 98	
Teaming, sundry persons		522 14	
Total			6,210 56
Excess of Expenditures over Appropriation			$710 56
Transfers to this Department: —			
From Bath House		$200 00	
" Commons and Squares		550 00	
			750 00
Balance relinquished to General Treasury			$39 44

INTEREST. (9.3)

Appropriation			$49,000 00
EXPENDED.			
For funded loan		$49,880 00	
Total			49,880 00
Excess of Expenditures over Appropriation			$880 00
Transfer to this Department from Interest (General)			1,000 00
Balance relinquished to General Treasury			$120 00

PARK DEPARTMENT.

SINKING FUND. (8.2)

Appropriation	$22,541 67
EXPENDED.	
For amount required by City ordinance for payment of park debt	22,541 67

PLUMBERS' EXAMINERS DEPARTMENT. (2.6)

Appropriation	$100 00

DEPARTMENT RECEIPTS. CARRIED TO GENERAL TREASURY.

For licenses (10.6)	$33 00	
Surplus of Appropriation relinquished to General Treasury		100 00

POLICE DEPARTMENT.

SALARIES AND CLERICAL ASSISTANCE. (2.1)

Appropriation		$124,000 00
EXPENDED.		
For salaries of: —		
Chief, L. J. Cloyes	$2,000 00	
Deputy chief, W. T. Batchelder	1,500 00	
Captains: —		
M. J. Folsom	1,400 00	
J. F. Murray	1,400 00	
F. B. Pullen	1,400 00	
Inspector, J. E. Murray	1,400 00	
Lieutenant, Henry C. Jones	1,197 56	
Sergeants	7,081 75	
Patrolmen	92,658 38	
Reserve officers	8,589 50	
Drivers	5,435 00	
Matrons	728 00	
Pension, Benjamin McKeen	546 00	
Total		125,336 19
Excess of Expenditures over Appropriation		$1,336 19
Transfer to this Department from Contingent Fund		1,350 00
Balance relinquished to General Treasury		$13 81

GENERAL EXPENSES. (2.1)

Appropriation		$5,000 00
DEPARTMENT RECEIPTS. CARRIED TO GENERAL TREASURY.		
For Ambulance removals	$102 00	
Cloth	641 31	
Fines: —		
J. R. Fairbairn House of Correction	701 00	
E. W. Law, Third District Court	3,099 70	
Minors' licenses	213 15	
	$4,757 16	
Amount carried forward		$5,000 00

POLICE DEPARTMENT, GENERAL EXPENSES — Continued

Amount brought forward . .			$5,000 00
	EXPENDED.		
For Badges, E. T. Bynner . . .		$15 00	
Belts, billies and straps, and repairs: —			
R. Masstrangialo	$78 10		
Sundry persons	1 45		
	79 55		
Binding, J H H. McNamee Co. .		8 00	
Buttons, D. Evans & Co. . . .		60 00	
Car tickets: —			
Boston Elevated Railway Co. .		300 00	
Cash expended for sundries: —			
Patrick J. Hurley	$29 30		
J. E. Murray	20 10		
J. F. Murray	9 14		
F. B. Pullen	12 95		
Sundry persons	6 30		
	77 79		
Cleaning stations: —			
Julia Delaney	$18 30		
Mary McEachern	96 00		
Anna Wright	120 00		
	234 30		
Cloth for uniforms: —			
Thos. W. Talcott	$16 44		
Wendell, Fay & Co. . . .	549 57		
	566 01		
Directories: —			
W. A. Greenough & Co. . . .	$3 00		
E. F. Hunt & Co.	15 00		
	18 00		
Disinfectants, Puritan Germicide Co.		13 50	
Dues, Gas Consumers' Association .		36 00	
Expressage: —			
Savage & Son	$6 65		
Sundry persons	95		
	7 60		
Fire arms and repairs: —			
Wm Read & Sons		109 58	
Food for prisoners: —			
J. F. Danskin	$9 67		
Geo H. Murray	14 68		
	24 35		
Furniture, furnishings and repairs: —			
Brock Bros.	$15 59		
James Grant	34 90		
S. H. Harrington	9 25		
D W. Hyde & Co.	3 90		
	63 64		
Hardware, tools and supplies: —			
G. W. Burditt	$24 60		
E. T. Bynner	44 65		
Amounts carried forward . . .	$69 25	$1,613 32	$5,000 00

POLICE DEPARTMENT, GENERAL EXPENSES — Continued.

Amounts brought forward . .	$69 25	$1,613 32	$5,000 00
For F. E. Hewins	9 29		
D. W. Hyde & Co.	9 33		
J. C. Moor	7 24		
W. A. Morrison	5 75		
F. A. White	5 71		
Yerxa & Yerxa	8 50		
Sundry persons	16 52		
		131 59	
Harness and repairs: —			
C. D. Ormes	$12 95		
Sundry persons	50		
		13 45	
Hay, grain and straw: —			
A. G. Dore & Co.	$523 55		
E. R. Lovell & Co.	43 55		
E. B. West & Co.	133 22		
		700 32	
Heating buildings: —			
Public Property Department, City Buildings		890 00	
Horse board, Whiting & Prescott .		300 00	
Horse clipping, Ferris & Co. . .		7 50	
Horseshoeing: —			
Wm. Balmer	$12 00		
P. J. Callahan	27 00		
G. W. Lowd & Co.	108 00		
		147 00	
House repairs: —			
Carpentry: —			
W. H. Norris	$45 89		
Painting, glazing, etc.: —			
Geo. H. Hughes	14 75		
Plumbing: —			
Sundry persons	5 05		
		65 69	
Ice, Fresh Pond Ice Co. . . .		34 62	
Laundry work: —			
Mrs. Annie I. Dow . . .	$10 50		
Warren H Dow	10 75		
Margaret McCabe	4 08		
Bridget Mailoy	7 55		
		32 88	
Lighting: —			
Cambridge Electric Light Co. .	$121 67		
Cambridge Gas Light Co. . .	496 70		
		618 37	
Medicines, drugs, etc.: —			
Peake Manufacturing Co. . .	$25 85		
Sundry persons	3 90		
		29 75	
Photographs, F. M. Ellis . . .		38 00	
Amounts carried forward . . .		$4,622 49	$5,000 00

POLICE DEPARTMENT, GENERAL EXPENSES — Concluded.

Amounts brought forward		$4,622 49	$5,000 00
For professional services: —			
Sundry physicians		6 00	
Refund on minors' license badges		37 05	
Repairing awnings, G. W. Burditt		15 50	
"Revised Laws," Commonwealth of Massachusetts		18 00	
Stationery, printing, etc.: —			
Caustic & Claflin	$149 75		
City Messenger Department	68 89		
Co-operative Press	5 00		
Cotton & Gould	217 20		
J. A. Cummings Printing Co.	7 74		
J. Frank Facey	14 75		
		463 33	
Sundries		28 31	
Telephone rent and tolls		452 63	
Typewriter: —			
Smith Premier Typewriter Co.		92 50	
Wagon Repairs: —			
F. Ivers & Son	$10 40		
Chas. Waugh & Co.	166 55		
Sundry persons	2 75		
		179 70	
Total			5,915 51
Excess of Expenditures over Appropriation			$915 51
Transfer to this Department from Contingent Fund			950 00
Balance relinquished to General Treasury			$34 49

PUBLIC LIBRARY DEPARTMENT.

MAIN LIBRARY. SALARIES. (6.2)

Appropriation		$9,500 00
EXPENDED.		
For salaries of: —		
Librarian, Wm. L. R. Gifford	$2,975 00	
Assistants: —		
Etta L. Russell	799 95	
Winifred B. Smith	594 50	
Harriet D. Lochman	589 00	
Charlotte E. Stewart	594 50	
Haida N. Parker	490 68	
Alfred E. Thayer	486 27	
Effie L. Chapman	394 46	
Amounts carried forward	$6,924 36	$9,500 00

PUBLIC LIBRARY DEPARTMENT, MAIN LIBRARY, SALARIES — Concluded.

Amounts brought forward	$6,924 36	$9,500 00
For L. Edna Brooks	399 96	
Sundry assistants	776 52	
Carrier, Gilbert Davoren	249 96	
Janitor, T M. Thomas	1,173 21	
Assistant Janitor, B. D. Hawkins	20 00	
Total		9,544 01
Excess of Expenditures over Appropriation		$44 01
Transfer to this Department from Main Library, General Expense		50 00
Balance relinquished to General Treasury		$5 99

MAIN LIBRARY, GENERAL EXPENSES. (6.2)

Appropriation		$8,500 00

RECEIVED.

For dog licenses	$4,635 43	
Fines, etc.	573 17	
	$5,208 60	

EXPENDED.

For Advertising: —			
Cambridge Chronicle Co.	$5 50		
Cambridge Tribune	4 00		
		$9 50	
Binding and binders: —			
Boston Bookbinding Co.	$117 86		
David Farquhar	274 70		
J. H. H. McNamee	9 55		
J. H. H. McNamee Co.	262 43		
Wm. E. Toner	249 87		
		914 41	
Books, periodicals, etc.: —			
Amee Bros.	$623 37		
T. H. Castor & Co.	58 73		
Oliver Ditson Co.	67 68		
Dodd, Mead & Co.	15 00		
E-sex Publishing Co.	6 00		
Funk & Wagnalls Co.	6 00		
Ginn & Co.	5 00		
E. B. Hall & Co.	70 00		
Harper & Bros.	24 00		
H. S. Inman	10 00		
C E. Lauriat Co.	61 20		
Little, Brown & Co.	2,959 79		
Geo. E Littlefield	396 00		
The Macmillan Co	5 00		
Mass. Historical Society	6 00		
Amounts brought forward	$4,313 77	$923 91	$8,500 00

PUBLIC LIBRARY DEPARTMENT, MAIN LIBRARY, GENERAL EXPENSES — Continued.

Amounts brought forward . .	$4,313 77	$923 91	$8,500 00
For Mass. Society of Mayflower Descendants	10 00		
James H. Moody	5 00		
Moulton Publishing Co. . . .	10 00		
Chas. Scribner's Sons . . .	6 00		
Soule Art Co.	5 00		
The Times	61 75		
Jas. T. White & Co. . . .	8 00		
H. W. Wilson	8 00		
Sundry persons	7 20		
		4,434 72	
Book supports, Library Bureau .		18 00	
Cheese cloth and towels, Parke Snow		6 00	
Clocks, Daniel Pratt's Sons . .		21 75	
Directories: —			
W. A. Greenough & Co. . . .	$9 00		
Sampson, Murdock & Co. . .	6 00		
		15 00	
Expressage, Sawin's Express . .		35 05	
Fuel, Metropolitan Coal Co. . .		392 71	
Furniture and furnishings: —			
Hopkinson & Holden . . .	$7 50		
Robert Josselyn	30 82		
Library Bureau	46 25		
Steadman A. Rice	32 00		
Sundry persons	12 34		
		128 91	
Hardware and supplies: —			
Brock & Eaton	$45 05		
Sundry persons	7 81		
		52 86	
House repairs: —			
Carpentry: —			
John Quin & Son	$21 50		
Sundry persons	75		
Heating apparatus repairs: —			
Greene & Co.	38 41		
Roberts Iron Works Co. . .	14 17		
Inspection of boilers, S. C. Baxter	4 00		
Mason work, A. P. Greenleaf .	5 76		
		84 59	
Ice, Fresh Pond Ice Co. . . .		6 51	
Insurance, R B. Walker . . .		378 00	
Laundry work, T. M. Thomas . .		14 16	
Lighting: —			
Cambridge Electric Light Co. .	$479 84		
Cambridge Gas Light Co. . .	304 10		
		783 94	
Amounts carried forward . . .		$7,296 11	$8,500 00

PUBLIC LIBRARY DEPARTMENT, MAIN LIBRARY, GENERAL EXPENSES — Concluded.

Amounts brought forward . .		$7,296 11	$8,500 00
For local stations: —			
M. I. Dow	$30 00		
E. C. Gove	25 00		
J. W. Hunnewell	50 00		
Carrie E. Phillips	25 00		
The Prospect Union . . .	30 00		
Michael Whalen	30 00		
P. A. Yerxa	20 00		
		210 00	
Mantels, Houghton & Dutton . .		17 28	
Stamps, H. C. Dimond & Co. . .		5 09	
Stationery, printing and typewriter supplies: —			
Amee Bros.	$22 11		
Boston Bank Note Co. . . .	8 00		
Caustic & Clafiin . . .	123 70		
City Messenger Department . .	30 00		
The Co-operative Press . .	341 00		
J. A. Cummings Printing Co. .	15 73		
Hammond Typewriter Co. . .	18 05		
Hooper, Lewis & Co . . .	58 59		
Public Printer, Washington, D. C.	20 00		
U. S Card Index Co. . . .	9 80		
Edward W. Wheeler . . .	178 25		
Sundry persons	13 65		
		838 88	
Sundries		13 82	
Telephone rent and tolls . . .		67 51	
Total			8,448 69
Surplus of Appropriation			$51 31
Transfer from this Department to Main Library, Salaries			50 00
Balance relinquished to General Treasury . . .			$1 31

EAST CAMBRIDGE BRANCH. SALARIES. (6.2)

Appropriation	$930 00

EXPENDED.

For salaries of: —		
Superintendent, J. J. Henderson .	$741 66	
Assistant, J. J. McCarthy . .	186 00	
Total		927 66
Surplus of Appropriation relinquished to General Treasury		$2 34

PUBLIC LIBRARY DEPARTMENT — Continued.

EAST CAMBRIDGE BRANCH. GENERAL EXPENSES. (6.2)

Appropriation			$420 00
EXPENDED.			
For Advertising: —			
Times Publishing Co.		$5 00	
Binders and binding: —			
David Farquhar		20 88	
Books, periodicals, etc.: —			
Amee Bros.	$106 40		
E. B. Hall & Co.	40 00		
Little, Brown & Co.	159 84		
		306 24	
Hardware and supplies: —			
L. A. Stingel		15 55	
Lighting: —			
Cambridge Gas Light Co.		63 50	
Sundries		8 00	
Total			419 17
Surplus of Appropriation relinquished to General Treasury			83

ADDITION. (6.2)

Appropriation			$29,696 60
EXPENDED.			
For Advertising, Press Newspaper Co.		$7 25	
Contract for Building Addition: —			
Wm. Crane		27,560 28	
Insurance, R. B. Walker		84 00	
Plans, Van Brunt & Howe		664 61	
Shade fixtures, Worcester Bros.		21 08	
Total			28,337 22
Surplus of Appropriation relinquished to General Treasury			$1,359 38

PUBLIC PROPERTY DEPARTMENT.

CITY BUILDINGS. SALARIES. (1.6)

Appropriation		$9,500 00

EXPENDED.

For salaries of janitors and other employees in City Buildings	$10,699 90	
Total		10,699 90
Excess of Expenditures over Appropriation		$1,199 90
Transfers to this Department: —		
From City Buildings. General Expense	$1,100 00	
" Contingent Fund	100 00	
		1,200 00
Balance relinquished to General Treasury		10

CITY BUILDINGS. GENERAL EXPENSES. (1.6)

Appropriation	$7,500 00

DEPARTMENT RECEIPTS. CARRIED TO GENERAL TREASURY.

For care and heating (1.6)	$1,265 00
Lamp (1.6)	3 00
Rent: —	
Armory, Commonwealth of Massachusetts (2.7)	1,100 00
County of Middlesex (1.6)	900 00
Old Bridge schoolhouse (5.10)	85 00
Water Works Department (1.6)	1,200 00
Rent of land: — (5.10)	
Wm. Hanlon	208 30
	$4,761 30

EXPENDED.

For Dues, Gas Consumers' Association		$36 00	
Fuel: —			
P. F. Gayton & Co.	$6 90		
Metropolitan Coal Co	1,807 58		
		1,814 48	
Inspection of boilers, S. C. Baxter		16 00	
Lighting: —			
Cambridge Electric Light Co.	$1,581 33		
Cambridge Gas Light Co.	726 20		
		2,307 53	
Services as night watchman: —			
Alexander Sutherland		12 00	
Amounts carried forward		$4,186 01	$7,500 00

PUBLIC PROPERTY DEPARTMENT, CITY BUILDINGS,
SALARIES — Continued.

Amounts brought forward		$4,186 01	$7,500 00
For sundries		5 75	
Washing towels, Nellie M. Carey		81 78	
Repairs and alterations: —			
Carpentry: —			
Alfred Allcock	$7 04		
A. Y. Currie	10 00		
D. K. Dinsmore	9 25		
W. H. Norris	237 25		
Sundry persons	7 40		
		270 94	
Electrical work: —			
Geo. F. Dickson		7 36	
Elevator repairs: —			
Whittier Machine Co.		26 67	
Heating and ventilating apparatus repairs: —			
Brock Bros.	$36 59		
Brock & Eaton	206 56		
John B. Byrne	13 35		
M. T. Davidson	8 00		
Wm. Fitzgerald	47 58		
Greene & Co.	135 15		
W. Haley	24 48		
Higgins & Co.	67 42		
B. F. Sturtevant & Co.	13 10		
Sundry persons	7 26		
		559 49	
Lighting apparatus repairs: —			
Cambridge Electric & Supply Co.	$9 60		
Clark & Mills	6 80		
T. P. Clarke	6 63		
Electrical Dept., wire account	19 90		
Electric Gas Lighting Co.	7 92		
Pettingell-Andrews Co.	5 94		
Sundry persons	14 62		
		71 41	
Lock repairs: —			
Cambridge Electric & Supply Co.		9 60	
Mason work: —			
Henry McGahey	$18 31		
Wm. J. Rounds	59 80		
		78 11	
Painting, glazing, etc.: —			
J. L. P. Ackers	$76 46		
W. J. Edwards	39 90		
M. A. Feeley	41 75		
C. V. Hadley	22 10		
John J. Loan	9 70		
Sundry persons	6 95		
		196 86	
Plaster work: —			
Wm. J. Heron	$5 70		
Sundry persons	3 20		
		8 90	
Amounts carried forward		$5,502 88	$7,500 00

PUBLIC PROPERTY DEPARTMENT, CITY BUILDINGS,
SALARIES — Continued.

Amounts brought forward . .		$5,502 88	$7,500 00
For plumbing: —			
E. W. Clark	$77 78		
Levi Hawkes	9 83		
D. J. Keefe & Co. . . .	129 22		
John J. Long	32 85		
H. L. Rose	5 45		
Sundry persons	4 20		
		259 33	
Roof repairs: —			
John J. Blevins	$207 19		
E. W. Clark	12 21		
H. F. Peak	9 25		
		228 65	
Sundry repairs		1 00	
Supplies: —			
Clocks and repairs: —			
A. J Applegate Co. . . .	$11 00		
Floyd Watch & Clock Co. . .	19 50		
James A. Rice	6 25		
Sundry persons	5 75		
		42 50	
Combs, brushes, fans, etc.: —			
J. H. Corcoran & Co. . . .		21 26	
Furniture and furnishings, and repairs: —			
Derby Desk Co.	$25 20		
F. M. Eaton	7 00		
James Grant	27 84		
S. H. Harrington	48 72		
David Thomson	132 63		
Sundry persons	4 16		
		245 55	
Floor cloth, W. A. Wood Co. .		16 65	
Hardware, tools and supplies, and repairs: —			
Brock Bros.	$5 37		
E. T. Bynner	13 45		
Cambridge Electric & Supply Co.	9 10		
Wm. H. Claflin & Co. . . .	18 00		
Diamond Match Co. . . .	8 00		
J. A. Holmes & Co. . . .	5 50		
D. W. Hyde & Co. . . .	9 65		
Chas. Munroe	19 13		
F. L. Sawtell	13 00		
F. A. White	5 00		
Sundry persons	12 85		
		119 05	
Ice: —			
Fresh Pond Ice Co. . . .		58 94	
Oil and engine supplies: —			
Eagle Oil and Supply Co. . .	54 00		
Lubron Manufacturing Co. . .	25 78		
W. A. Morrison	28 09		
Amounts carried forward . . .	$107 87	$6,495 81	$7,500 00

PUBLIC PROPERTY DEPARTMENT, CITY BUILDINGS, SALARIES — Concluded.

Amounts brought forward . .	$107 87	$6,495 81	$7,500 00
For Standard Oil Co.	9 38		
Sundry persons	3 00		
		120 25	
Sundries		6 60	
Towels: —			
D. W. Hyde & Co. . . .		6 13	
Total		$6,628 79	

SUMMARY — EXPENDED.

Fuel	$1,814 48	
Lights	2,307 53	
Repairs and alterations . . .	1,869 85	
Supplies	636 93	
		$6,628 79
Surplus of Appropriation		$871 21
Transfer to this Department from Contingent Fund .		250 00
		$1,121 21
Transfer from this Department to City Buildings, Salaries		1,100 00
Balance relinquished to General Treasury . . .		$21 21

INCIDENTALS, SALARIES AND CLERICAL ASSISTANCE. (2.6)

Appropriation $5,500 00

EXPENDED.

For salaries of: —		
Superintendent of buildings: —		
Wm. H. Gray	$2,000 00	
Inspectors: —		
J. W. Emery	1,200 00	
L. D. Garfield	1,000 00	
C. H. M. Hunnewell . . .	1,000 00	
Clerk, Lillian W. Hyde . . .	300 00	
Total		$5,500 00

INCIDENTALS. GENERAL EXPENSES. (2.6)

Appropriation $900 00

EXPENDED.

For Bicycle repairs: —			
L. A. Stingel	$12 55		
Sundry persons	1 50		
		$14 05	
Amounts carried forward . . .		$14 05	$900 00

PUBLIC PROPERTY DEPARTMENT, INCIDENTALS, GENERAL EXPENSES — Concluded.

Amounts brought forward . .		$14 05	$900 00
For care and repair of tower clocks: —			
Chas. H. Chandler . . .	$13 00		
A. K. Jones	52 00		
J. B. Mace	26 00		
John W. Moore	31 25		
Geo. M. Stevens	3 70		
		125 95	
Carriage hire, Whiting & Prescott .		6 00	
Car tickets: —			
Boston Elevated Railway Co. .		130 00	
Desk, The Globe-Wernicke Co. .		46 50	
Horse board, Whiting & Prescott .		300 00	
Horseshoeing, Wm. F. Garrett . .		28 00	
Stationery, printing, etc.: —			
Chas. S. Binner Co. . . .	$5 40		
Cambridge Chronicle Co. . .	27 00		
Caustic & Claflin	9 00		
City Messenger Department . .	35 95		
Cotton & Gould	27 65		
J. A. Cummings Printing Co. .	11 07		
Sundry persons	6 75		
		122 82	
Sundries		6 57	
Telephone rent and tolls . . .		112 10	
Total			891 99
Surplus of Appropriation relinquished to General Treasury			$8 01

SCHOOL-HOUSES. SALARIES. (6.1)

Appropriation			$34,000 00
EXPENDED.			
For salaries of janitors and other employees		$33,881 88	
Total			33,881 88
Surplus of Appropriation relinquished to General Treasury			$118 12

SCHOOL-HOUSES. GENERAL EXPENSES. (6.1)

Appropriation			$37,000 00
DEPARTMENT RECEIPTS. CARRIED TO GENERAL TREASURY.			
For keys	$8 75		
Half cost of fence, Rev. John Flatley	102 00		
	$110 75		
Amount carried forward . . .			$37,000 00

PUBLIC PROPERTY DEPARTMENT, SCHOOL-HOUSES, GENERAL EXPENSES — Continued.

Amount brought forward . .			$37,000 00
	EXPENDED.		
For Care of gymnasium, Latin School: —			
T. F. Cahir		$12 00	
Expressage and moving furniture: —			
P. Biggin	$138 00		
Donovan's Express	24 21		
Sundry persons	13 75		
		175 96	
Fuel: —			
P. F. Gayton & Co.	$238 05		
Metropolitan Coal Co. . . .	11,132 02		
N. E. Gas & Coke Co. . .	10 05		
		11,380 12	
Inspecting boilers, S. C. Baxter .		66 00	
Lighting: —			
Cambridge Electric Light Co. .	$1,419 34		
Motor service	101 54		
Cambridge Gas Light Co. . .	594 00		
Service pipe	7 98		
		2,122 86	
Printing, Cambridge Chronicle Co. .		8 00	
Teaming fuel, Street Department .		6 00	
Sundries		3 00	
Repairs and alterations: —			
Carpentry: —			
Alfred Allcock	$41 99		
M. C. Beedle	167 41		
D. K. Dinsmore	253 96		
W. Fillmore & Co. . . .	44 71		
Finlay & McIsaac . . .	9 96		
O. B. French	160 05		
F. B. Furbish	8 09		
W. H. Norris	1,366 25		
John Quin & Son	630 83		
Sundry persons	9 57		
		2,692 82	
Heating and ventilating repairs: —			
Ashton Valve Co. . . .	$6 55		
Brock Bros.	54 00		
Brock & Eaton	88 93		
Wm. Campbell & Co. . . .	6 60		
James Carnes	60 00		
M. T. Davidson	17 30		
Wm. Fitzgerald	178 80		
Greene & Co.	520 27		
W. Haley	74 00		
I. C. Harris & Co. . . .	40 00		
Higgins & Co.	436 06		
Edward Kendall & Sons . .	228 18		
Amounts carried forward . . .	$1,710 69	$16,466 76	$37,000 00

PUBLIC PROPERTY DEPARTMENT, SCHOOL-HOUSES, GENERAL EXPENSES — Continued.

Amounts brought forward . .	$1,710 69	$16,466 76	$37,000 00
For Knowles Steam Pump Works .	87 15		
Lynch & Woodward . . .	10 40		
W. A. Morrison	16 96		
Moynahan & Co.	168 15		
J F. Pennell	141 55		
Roberts Iron Works Co. . .	18 81		
D J. Wild & Co. . . .	140 75		
S. Homer Woodbridge . .	45 00		
Sundry persons	11 10		
		2,350 56	
Lighting apparatus and electrical repairs: —			
American Electrical Works .	$33 08		
Brock Bros.	14 79		
F. Bryant & Co. . . .	267 15		
Cambridge Electric & Supply Co.	29 65		
Clark & Mills	32 70		
Geo. F. Dickson	7 94		
Electrical Dept., Wire Account .	41 15		
Electric Gas Lighting Co. . .	51 05		
Wm. Humans	12 30		
Johnson Electric Service Co. .	21 40		
Kellogg Switchboard & Supply Co.	8 75		
John J. Long	33 58		
B. E. McDermott & Co. . .	247 30		
Shelby Electric Co. . . .	26 40		
Sundry persons	17 19		
		844 43	
Mason work: —			
John B. Byrne	$138 11		
Wm. Mahoney	37 60		
Henry McGahey	105 00		
Frank J. O'Reilley . . .	41 45		
Wm. J. Rounds	492 60		
		814 76	
Painting, glazing, etc.: —			
J. L. P. Ackers	$628 55		
C. P. Alberts	5 00		
L Bresnahan	13 70		
Wm. C. Carroll	61 17		
John Fallon	7 20		
M. A. Feeley	685 30		
Fred Hayden	10 50		
Woods Bros & Co. . . .	27 00		
Sundry persons	20 78		
		1,459 20	
Plaster work: —			
Harrington & Howell . .	$24 10		
Wm. J. Heron	83 40		
Samuel M. Reed & Co. . .	5 70		
		113 20	
Plumbing and sanitary repairs: —			
A. Baumeister	$57 02		
E. W. Clark	205 91		
Chas. A. Fallon	38 75		
Greene & Co.	19 76		
Amounts carried forward . .	$321 44	$22,048 91	$37,000 00

PUBLIC PROPERTY DEPARTMENT, SCHOOL-HOUSES, GENERAL EXPENSES — Continued..

Amounts brought forward . .	$321 44	$22,048 91	$37,000 00
For W. Haley	112 45		
Levi Hawkes	95 92		
D. J. Keefe & Co. . . .	20 28		
John J. Long	519 02		
H. L. Rose	279 45		
Thos. C. Sweeney & Co. . .	18 68		
Sundry persons	6 93		
		1,374 17	
Retaining wall, James Connell .		206 00	
Roof repairs: —			
John J. Blevins	$566 56		
H. F. Peak	75 29		
		641 85	
Sundry repairs		10 01	
Washing and cleaning: —			
Scott Williams . . .	$50 50		
Sundry persons	1 50		
		52 00	
Work on cess-pool: —			
Samuel McCulloch . . .		8 00	
Supplies: —			
Cheese cloth, W. A. Wood Co. .		13 00	
Clocks and repairs: —			
A. J. Applegate Co. . . .	$22 25		
Blodgett Bros. & Co. . . .	36 11		
E. J. Dunphy	8 25		
Floyd Watch & Clock Co. . .	19 00		
Wm. Humans	46 20		
James A. Rice	23 75		
Sundry persons	13 00		
		168 56	
Dusters, brooms, brushes, etc.: —			
G. W. Burditt	$368 83		
E. T. Bynner	176 41		
		545 24	
Disinfectants: —			
E. T. Bynner	$30 00		
C. W. Lerned & Co. . . .	25 00		
		55 00	
Extinguishers: —			
Knight & Thomas . . .		243 00	
Furniture, furnishings and repairs: —			
American Blackboard Co. . .	$330 96		
Brock Bros.	6 53		
E. T Bynner	56 40		
Wm. Caldwell	9 00		
Chandler Adjustable Chair & Desk Works	1,095 84		
Derby Desk Co.	40 25		
F. M. Eaton	27 05		
Amounts carried forward . . .	$1,566 03	$25,365 74	$37,000 00

PUBLIC PROPERTY DEPARTMENT, SCHOOL-HOUSES, GENERAL EXPENSES — Continued.

	Amounts brought forward . .	$1,566 03	$25,365 74	$37,000 00
For	Alex. S. Ford	5 40		
	James Grant	1,434 99		
	J. L. Hammett Co. . . .	6 88		
	Kenney Bros. & Wolkins . .	7 50		
	T. H. Kneeland	6 00		
	E. H. Patten	5 00		
	Phillips Bros. & Co. . . .	19 00		
	B. O. Rickards	5 65		
	Geo. W. Smith	150 13		
	Worcester Bros.	73 41		
	Sundry persons	3 60		
			3,283 59	
	Hardware, tools and repairs, and supplies: —			
	American Tool and Machine Co. .	$6 00		
	Boston Engineers' Supply Co. .	9 56		
	Brock Bros.	25 13		
	Brock & Eaton	46 84		
	E. T. Bynner	404 48		
	Cambridge Electric & Supply Co.	9 45		
	A. W. Chesterton & Co. . .	5 10		
	Wm. H. Claflin & Co. . . .	22 00		
	Dover Stamping Co. . . .	6 00		
	T. H. Kneeland	9 50		
	F. L. Sawtell	6 50		
	L. A. Stingel	11 88		
	A. G. Wills	9 60		
	F. A. White	42 08		
	Sundry persons	15 84		
			629 96	
	Ladders, C. W. H. Moulton & Co.		14 00	
	Lumber: —			
	Geo. W. Gale Lumber Co. . .	$3 35		
	Wm. H. Wood & Co. . . .	5 27		
			8 62	
	Oil: —			
	Eagle Oil & Supply Co. . .	$45 50		
	Standard Oil Co. . . .	1 43		
			46 93	
	Paint, polish, etc.: —			
	Hot Iron Paint Co. . . .	$80 00		
	Sundry persons	8 20		
			88 20	
	Sawdust, Geo. G. Page Box Co. .		24 75	
	Soap and powder: —			
	India Alkali Works . . .	$77 98		
	Chas. R. Teele	11 25		
	Sundry persons	1 00		
			90 23	
	Sundries		7 38	
	Tablet stone: —			
	Connecticut Steam Stone Co. .		85 00	
	Amounts carried forward . . .		$29,644 40	$37,000 00

PUBLIC PROPERTY DEPARTMENT, SCHOOL-HOUSES, GENERAL EXPENSES — Concluded.

Amounts brought forward . .		$29,644 40	$37,000 00
For Allston School Fire: —			
Carpentry: —			
W. Fillmore & Co. . . .	$46 72		
W. H. Norris	357 50		
		404 22	
Electrical work, F. Bryant & Co. .		14 00	
Furniture: —			
Chandler Adjustable Chair and Desk Works	$678 21		
Derby Desk Co.	71 50		
		749 71	
Labor, as per pay rolls . . .	$46 00		
Labor, Edward J. Burns . .	18 00		
		64 00	
Lighting apparatus: —			
B. E. McDermott & Co. . .		234 65	
Moving furniture and supplies: —			
P. Biggin	$69 50		
Dodge Express Co. . . .	5 00		
Herbert E. Phinney . . .	5 25		
		79 75	
Plaster work, Wm. J. Heron . .		37 00	
Plumbing, D. J. Keefe & Co. . ,		14 36	
Washing furniture, sundry persons		3 00	
Total		$31,245 09	

SUMMARY: EXPENDED.

For Fuel	$11,386 12	
Lighting	2,122 86	
Repairs	10,831 96	
Supplies	5,303 46	
Allston School Fire	1,600 69	
Total		31,245 09
Surplus of Appropriation relinquished to General Treasury		$5,754 91

ARMORY ON BEECH STREET. (2.7).

Appropriation		$300 00

EXPENDED.

For Fuel: —		
Metropolitan Coal Co. . . .	$27 30	
Lighting: —		
Cambridge Gas Light Co. . .	33 70	
Total		61 00
Surplus of Appropriation relinquished to General Treasury		$239 00

PUBLIC PROPERTY — Continued.

LAND FOR SCHOOL-HOUSE, ELM STREET. (6.1)

Appropriation	$11,000 00
Additional appropriation	258 10
	$11,258 10

DEPARTMENT RECEIPTS. CARRIED TO GENERAL TREASURY.

For old materials	$258 10	

EXPENDED.

For Examination of titles: —		
Wm. V. Thompson	$105 00	
Labor as per pay-roll	275 25	
Land, Margaret Collins	3,500 00	
Land and buildings, Wm. G. MacLeod	7,200 00	
Serving notices, James E. Lennon	7 50	
Tearing down buildings, Arthur Barry	170 00	
Total		11,257 75
Surplus of Appropriations relinquished to General Treasury		35

NEW SCHOOL-HOUSE, WARD ONE. (6.1)

Appropriation	$20,980 89

EXPENDED.

For Bronze butts, E. T. Bynner		$18 00	
Building contract: —			
Fessenden & Libby Co.		900 09	
Cleaning vault, H G. Kennedy		15 00	
Clocks, Davis Bros.		170 00	
Insurance: —			
John J. Ahern	$100 00		
Brooks & Conley	120 00		
Geo. H. Carrick	200 00		
		420 00	
Pay roll, watchmen		1,038 00	
Plans, etc., George Fogerty		714 50	
Total			3,275 59
Surplus of Appropriation			$17,705 30
Transfer to this Department from Public Property, Sanitary Arrangements			5,850 66
Balance relinquished to General Treasury			$23,555 96

PUBLIC PROPERTY — Continued.

NEW SCHOOL-HOUSE, WARD TWO. (6.1)

(Willow Street.)

Appropriation			$79,923 80
EXPENDED.			
For Advertising and printing: —			
Cambridge Chronicle Co.	$7 75		
Press Newspaper Co.	15 05		
		$22 80	
Architect's services: —			
Aaron H. Gould		2,256 61	
Contract for building: —			
F. G. Coburn & Co.		16,679 25	
Total			18,958 66
Surplus of Appropriation relinquished to General Treasury			$60,965 14

RIFLE RANGE. (2.7)

Appropriation			$400 00
EXPENDED.			
For Carpentry: —			
W. H. Norris		$242 04	
Electrical work: —			
F. Bryant & Co.		99 24	
Total			341 28
Surplus of Appropriation relinquished to General Treasury			$58 72

SANITARY ARRANGEMENTS. (6.1)

Appropriation			$6,408 47
EXPENDED.			
For Gannett School: —			
Sanitary arrangements: —			
Thos. F. Martin	$69 50		
Moynahan & Co.	129 52		
		$199 02	
Lassell School: —			
Sanitary arrangements: —			
H. L. Rose		83 95	
Riverside School: —			
Sanitary arrangements: —			
D. K. Dinsmore	$45 75		
F. J. O'Reilly	39 22		
A. H. Ricker	58 28		
		143 25	
Amounts carried forward		$426 22	$6,408 47

PUBLIC PROPERTY, SANITARY ARRANGEMENTS — Concluded.

Amounts brought forward . .	$426 22	$6,408 47
For Tarbell School: —		
Sanitary arrangements: —		
Thos. F. Martin	131 59	
Total		557 81
Surplus of Appropriation		$5,850 66
Transfer from this Department to New School-house, Ward One		$5,850 66

VOTING BOOTH. (1.5)

Appropriation	$400 00

EXPENDED.

For voting booth: —		
S. J. Kelley	$395 00	
Total		395 00
Surplus of Appropriation relinquished to General Treasury		$5 00

SCHOOL DEPARTMENT.

CARE OF TRUANTS. (6.1)

Appropriation	$1,800 00

EXPENDED.

For board: —		
Middlesex County Truant School .	$1,826 85	
Car tickets, Boston & Maine R. R. .	20 25	
Total		1,847 10
Excess of Expenditures over Appropriation . .		$47 10
Transfer to this Department from Contingent Fund .		50 00
Balance relinquished to General Treasury . . .		$2 90

SCHOOL DEPARTMENT — Continued.

FLAGS. (6.1)

Appropriation		$100 00
EXPENDED.		
For flags, Boston Regalia Co.	$54 75	
Halyards, etc.: —		
Henry A. Wheeler & Co.	32 40	
Placing halyards, J. Johansen	12 00	
Total		99 15
Surplus of Appropriation relinquished to General Treasury		85

INCIDENTALS. (6.1)

Appropriation		$1,500 00
EXPENDED.		
For salaries: —		
Secretary, S. B. Hubbard $400 00		
Messenger, Frank T. Evans 25 00		
	$425 00	
Advertising: —		
Cambridge Democrat $4 50		
Cambridge Times 4 50		
Sacred Heart Review 5 00		
Press Newspaper Co. 3 00		
	17 00	
Cambric, J. H. Corcoran & Co	1 25	
Car tickets: —		
Boston Elevated Railway Co.	250 00	
Carting piano, Chickering & Sons	9 00	
Copying names, Florence E. Porter	15 00	
Electrical work and supplies: —		
Electric Gas Light Co. $1 28		
Electrical Department, Wires 15 50		
Pettingell, Andrews Co. 1 25		
	18 03	
Expenses, Sanders Theatre, Harvard University	9 98	
Music: —		
Oliver Ditson Co. $13 56		
Ginn & Co. 4 08		
	17 64	
Photographic goods: —		
Horgan, Robey & Co.	1 64	
Postage, F. M. Small	96 40	
Services, A. K. Jones	3 00	
Amounts carried forward	$863 94	$1,500 00

SCHOOL DEPARTMENT, INCIDENTALS — Concluded.

Amounts brought forward		$863 94	$1,500 00
For stationery, printing: —			
Cambridge Chronicle Co.	$87 50		
J. A. Cummings Printing Co.	121 62		
J. Frank Facey	23 25		
G. B. Lenfest	7 50		
Louis F. Weston	98 50		
		338 37	
Taking census: —			
Walter K. Cabot	$12 50		
Matthew Carmichael	62 50		
Geo. B. Caswell	55 00		
Elizabeth McCrehan	15 00		
George H. Munroe	25 00		
		170 00	
Telephone service		158 98	
Transmitter: —			
Kellogg Switchboard & Supply Co.		3 50	
Travelling expenses: —			
Francis Cogswell		18 26	
Typewriter repairs: —			
United Typewriter & Supplies Co.		1 30	
Total			1,554 35
Excess of Expenditures over Appropriation			$54 35
Transfer to this Department from Contingent Fund			275 00
Balance relinquished to General Treasury			$220 65

SALARIES. (6.1)

Appropriation $350,000 00

Department Receipts. Carried to General Treasury.

For education of children: —		
Commonwealth of Massachusetts	$691 00	
Hopkins Charity Fund	621 56	
Tuition of non-residents	4,734 25	
Tuition, Harvard College	1,984 00	
	$8,030 81	

EXPENDED.

For salaries of: —		
Superintendent, Francis Cogswell	$3,500 00	
Superintendent's clerk, Althea B. Frost	750 00	
Agent, S. B. Hubbard	2,100 00	
Clerk, Myrta E. Smith	600 00	
Amounts carried forward	$6,950 00	$350,000 00

SCHOOL DEPARTMENT, SALARIES — Concluded.

Amounts brought forward		$6,950 00	$350,000 00
For Special Instructors: —			
Botany, Sarah E. Brassill	$1,000 00		
Drawing: —			
Peter Roos	1,900 00		
Lucia N. Jennison	800 00		
Gymnastics: —			
Sara E. Boudren	900 00		
Bessie W. Howard	210 00		
Music: —			
Frederick E. Chapman	2,000 00		
Georgia E. Martin	240 00		
Sewing: —			
Agnes Gordon	700 00		
Alice H. Nay	600 00		
Nancy T. Dawe	600 00		
Primary Supervisor, Mary A. Lewis	1,200 00		
		10,150 00	
Salaries of teachers in: —			
Latin School	$25,236 00		
English High School	26,747 51		
Grammar Schools	127,747 99		
Primary Schools	89,927 49		
Wellington Training School	15,656 42		
Kindergarten Schools	16,227 17		
Rindge Manual Training School	19,108 67		
Substitutes	1,565 75		
		322,217 00	
Salaries of teachers in evening schools: —			
Drawing, free-hand	$430 00		
" Mechanical	868 00		
High	1,682 75		
Allston	1,122 50		
Putnam	878 00		
Shepard	597 00		
Webster	621 00		
		6,199 25	
Salaries of truant officers		3,870 00	
Porter, John H. Lemon		600 00	
Total			349,986 25
Surplus of Appropriation relinquished to General Treasury			$13 75

TEXT BOOKS AND SUPPLIES. (6.1)

Appropriation	$17,000 00

Department Receipts. Carried to General Treasury.

For sale of, and damage to, books	$516 50
Amount carried forward	$17,000 00

SCHOOL DEPARTMENT, TEXT BOOKS AND SUPPLIES — Continued.

Amount brought forward			$17,000 00
	EXPENDED.		
For apparatus and supplies: —			
Adams, Cushing & Foster	$1,547 23		
Allen, Totman Co	113 98		
Barbour, Stockwell Co.	110 18		
Selma E. Berthold	23 80		
Blodgett, Ordway & Webber	30 56		
Brown, Durrell & Co.	78 98		
Brown & Wales	17 28		
Burditt & Williams Co.	317 24		
Carter, Rice & Co.	15 84		
Chandler & Barber	280 87		
Cook-Vivian Co.	3,289 06		
Davidson Rubber Co.	11 95		
Dexter Bros.	34 58		
Diamond Paste Co.	23 80		
Dover Stamping & Mfg. Co.	10 00		
Eimer & Amend	372 21		
Fitz, Dana & Co.	196 85		
Frost & Adams Co.	163 77		
J. L. Hammett Co.	114 25		
Hopkinson & Holden	9 00		
John A. Hubbard	14 65		
D. W. Hyde & Co.	14 66		
Jordan, Marsh Co.	19 36		
Geo. F. King & Co.	7 00		
L. E Knott Apparatus Co.	110 55		
Lord & Merrow	16 93		
Bunkio Matsuki	35 00		
Alex. Millan	8 89		
F. P. Merrill	47 54		
Emma A. Scudder	5 08		
Stark Tool Co	58 80		
B. F. Sturtevant Co.	58 64		
Sundry persons	5 61		
Wadsworth, Howland Co.	241 48		
		$7,405 62	
Binding, J. H. H. McNamee Co.		674 71	
Books: —			
Allyn & Bacon	$80 18		
American Book Co.	943 63		
D Appleton & Co.	31 20		
Edw. E. Babb & Co.	357 85		
Boston Music Co.	14 07		
Boston School Supply Co.	502 54		
T. H. Castor & Co.	200 69		
DeWolf, Fiske & Co.	63 42		
Oliver Ditson Co.	32 02		
Frank T. Evans	5 00		
Ginn & Co.	2,201 16		
Gregg Publishing Co.	48 75		
Thos. Groom & Co.	7 75		
Wm. H. Guild & Co.	17 05		
J. L. Hammett Co.	15 84		
D. C. Heath & Co.	385 83		
Houghton, Mifflin & Co.	745 88		
Lee & Shepard	22 09		
Amounts carried forward	$5,674 95	$8,080 33	$17,000 00

SCHOOL DEPARTMENT, TEXT BOOKS AND SUPPLIES — Concluded.

Amounts brought forward	$5,674 95	$8,080 33	$17,000 00
For Geo. P. Lord	24 25		
Longmans, Green & Co.	63 00		
Massachusetts Bible Society	15 00		
The Morse Co.	203 82		
Benj. H. Sanborn & Co.	265 64		
Thos R. Shewell & Co.	72 00		
Silver, Burdett & Co.	404 72		
Thompson, Brown & Co.	1,500 65		
University Publishing Co.	71 04		
Wm. Ware & Co.	114 50		
		8,409 57	
Cabinet card index: —			
Water Works Department		10 00	
Car tickets: —			
Boston Elevated Railway Co.		25 00	
Diplomas, Boston Bank Note Co.		155 92	
Drawings, Gustaf Larsson		13 20	
Engrossing diplomas: —			
Henry W. Stone		82 70	
Expressage: —			
Bancroft's Express	$9 20		
H. W. Bettinson & Co.	16 30		
P. Biggin	171 65		
W. A. Nichols	50 41		
Sawin's Express	39 64		
		287 20	
Filing saws, Frank Creighton		22 05	
Fuel, Coleman Bros.		78 75	
Lumber, Geo. W. Gale Lumber Co.		862 54	
Pianos, Chickering & Sons		800 00	
Pianos rented, Briggs & Briggs		23 00	
Piano stools and covers: —			
E. M. Cundall & Son		24 50	
Pianos tuned, Briggs & Briggs		30 00	
Postage, F. M. Small		116 10	
Printing: —			
Cambridge Chronicle Co.	$50 50		
Alex. H. Elder	19 00		
J. Frank Facey	19 75		
G. B. Lenfest	14 00		
Louis F. Weston	37 50		
		140 75	
Smoke pipe at Rindge Manual Training School: —			
Higgins & Co.		15 00	
Subscriptions: —			
N. E. Publishing Co.		10 65	
Sundries		10 05	
Washing, Catherine Flynn		23 63	
Total			19,220 94
Excess of Expenditures over Appropriation			$2,220 94
Transfer to this Department from Contingent Fund			2,350 00
Balance relinquished to General Treasury			$129 06

SCHOOL DEPARTMENT — Continued.

TRANSPORTATION OF PUPILS. (6.1)

Appropriation		$300 00
EXPENDED.		
For conveying children to school: —		
Timothy J. Shine	$300 00	
Total		300 00
Transfer to this Department from Contingent Fund		$200 00
" from " " to " "		200 00

VACATION SCHOOLS. (6 1)

Appropriation			$2,000 00
EXPENDED.			
For salaries of teachers		$865 00	
Apparatus and supplies: —			
Brown, Durrell & Co.	$13 55		
Burditt & Williams Co	10 58		
Lord & Merrow	10 49		
Sundry persons	3 00		
Wadsworth, Howland & Co.	34 27		
		71 89	
Lumber, Geo. W. Gale Lumber Co.		61 58	
Printing: —			
J. Frank Facey	$12 00		
Sundry persons	6 50		
		18 50	
Total			1,016 97
Surplus of Appropriation			$983 03
Transfer from this Department to Contingent Fund			980 00
Balance relinquished to General Treasury			$3 03

SEALER OF WEIGHTS AND MEASURES.

SALARIES. (2.6)

Appropriation			$1,850 00
EXPENDED.			
For salary of Sealer, A. S. K. Clark		$1,000 00	
Deputy Sealer, J. C. Connors		765 00	
Assistants: —			
E. A. Counihan, Jr.		8 40	
Edw. E. Coye		3 50	
Amounts carried forward		$1,776 90	$1,850 00

SEALER OF WEIGHTS AND MEASURES, SALARIES — Concluded.

Amounts brought forward		$1,776 90	$1,850 00
For A. H Edgerly		5 85	
Wm. A. Forbes		4 50	
Total			1,787 25
Surplus of Appropriation			$62 75
Transfer from this Department to General Expenses			60 00
Balance relinquished to General Treasury			$2 75

GENERAL EXPENSES. (2.6)

Appropriation	$650 00

DEPARTMENT RECEIPTS. CARRIED TO GENERAL TREASURY.

For court fees		$16 40
Fees for sealing, A. S. K. Clark		862 71
Fees for weighing: —		
Lechmere Square	$34 72	
North Cambridge	15 72	
		50 44
Sundries		2 48
		$932 03

EXPENDED.

For acid, Malden Chemical Co.		$25 90	
Advertising, Press Newspaper Co.		10 80	
Badges, etc., S. M. Spencer & Son		5 50	
Carpentry, O. B. French		44 16	
Car tickets: —			
Boston Elevated Railway Co.		15 00	
Hardware and supplies: —			
Brock & Eaton	$7 30		
Sundry persons	2 12		
		9 42	
Harness and repairs: —			
Jas. Curry	$45 00		
F. Ivers & Son	16 90		
		61 90	
Heating apparatus repairs: —			
W. H. O'Leary		7 53	
Horse board, Street Department		216 00	
Horseshoeing, Street Department		11 75	
Lumber, Geo. W. Gale Lumber Co.		72 44	
Pung, F. P. Merrill		23 00	
Scales, Thos. F. Tracy		160 00	
Scales repaired and painted: —			
The Fairbanks Co.	$146 45		
C. K. Leach	6 00		
		152 45	
Amounts carried forward		$815 85	$650 00

SEALER OF WEIGHTS AND MEASURES, GENERAL EXPENSES — Concluded.

Amounts brought forward		$815 85	$650 00
For stamps, etc.: —			
Allen Bros.	$13 95		
S. M. Spencer & Son	6 40		
		20 35	
Stationery, printing, etc.: —			
Cambridge Chronicle Co.	$12 00		
Caustic & Claflin	31 50		
City Messenger Department	11 65		
Sundry persons	7 42		
		62 57	
Sundries		25 10	
Tape, Lufkin Rule Co.		10 00	
Telephone rent and tolls		9 60	
Wagon and carriage repairs: —			
J. E Fitzgerald	$35 00		
T. H. Kneeland	6 50		
		41 50	
Total			984 97
Excess of Expenditures over Appropriation			$334 97
Transfers to this Department: —			
From Salaries		$60 00	
" Contingent Fund		275 00	
			335 00
Balance relinquished to General Treasury			03

SEWER DEPARTMENT.

CONSTRUCTION, GENERAL. (4.10)

Appropriation	$15,000 00

DEPARTMENT RECEIPTS. CARRIED TO GENERAL TREASURY.

For Assessments (11.8)	$5,238 39
Permits to drain (4.10)	389 10
Sand (4.10)	86 00
	$5,713 49

EXPENDED.

For labor as per pay-rolls	$4,065 60	
Ballast, Wm. B. Mullen	36 00	
Bricks, New England Brick Co.	762 88	
Castings, Sessions Foundry Co.	69 59	
Catch-basin stone, John J. Cuddihy	84 00	
Catch-basins: —		
Boston Double-Catch-Basin, Sewer and House Trap Co.	126 00	
Amounts carried forward	$5,144 07	$15,000 00

SEWER DEPARTMENT, CONSTRUCTION, GENERAL — Concluded.

Amounts brought forward		$5,144 07	$15,000 00
For cement, John M. Riley		488 37	
Cutting stones, Austin Ford & Son		30 00	
Execution of Court, Thos. J. Garvin		75 00	
Frames, grates, covers: —			
Osgood & Witherly	$84 40		
Sessions Foundry Co.	650 40		
		734 80	
Gravel: —			
J. J. Brassil	$157 28		
Jeremiah Sullivan	18 75		
		176 03	
Hardware, tools and repairs: —			
James Maitland	$14 36		
E. T. Bynner	38 17		
		52 53	
Iron work, H. J. Shaw		24 69	
Lumber, E. B. James Lumber Co.		42 80	
Pipe, D. W. Lewis		715 18	
Teaming, P. Biggin		26 25	
Total			7,509 72
Surplus of Appropriation relinquished to General Treasury			$7,490 28

IMPROVED SEWERAGE. (4.10)

Appropriation	$48,845 51
Additional Appropriation	20,000 00
	$68,845 51

EXPENDED

For labor as per pay-rolls		$39,780 06	
Advertising and printing: —			
Boston Herald Co.	$17 25		
Press Newspaper Co.	5 20		
		22 45	
Beams, Chelmsford Foundry Co.		116 16	
Bricks, New England Brick Co.		3,454 45	
Castings, repairs, etc., H. J. Shaw		61 33	
Cement, John M. Riley		3,975 00	
Cutting catch-basin stones: —			
Austin Ford & Son		33 60	
Damages, N. J. O'Shaughnessy		75 00	
Expressage, Sawin's Express		1 50	
Frames, grates, rings and covers: —			
Osgood & Witherly	$98 64		
Barbour, Stockwell Co.	101 75		
Sessions Foundry Co.	271 72		
		472 11	
Freight, Boston & Maine R. R.		1 00	
Fuel, Metropolitan Coal Co.		474 03	
Amounts carried forward		$48,466 69	$68,845 51

SEWER DEPARTMENT, IMPROVED SEWERAGE — Concluded.

Amounts brought forward . .		$48,466 69	$68,845 51
For gravel: —			
J. J. Brassill	$1,628 74		
Wm B. Mullen .	237 02		
David O'Mara	8 00		
Thos. O'Hara	57 50		
		1,931 26	
Hardware, tools and repairs, and supplies: —			
E T. Bynner	$475 64		
James Maitland . . .	53 35		
Perrin, Seamans & Co. . . .	247 50		
Daniel J. Sullivan	39 80		
Brock Bros.	39 65		
		855 94	
Harness and repairs, M. Cavanagh .		12 50	
Hogshead, E Bancroft & Son . .		2 25	
Iron works, H. J. Shaw . . .		47 99	
Lumber and cement: —			
Wm. H. Wood & Co. . . .	$92 39		
E. B. James Lumber Co. . .	2,089 32		
		2,181 71	
Mill work: —			
J. H. Keenan & Son . . .	$309 49		
H. A. Scranton	63 43		
		372 92	
Oil: —			
Standard Oil Co.	$76 83		
Alden Speare's Sons Co. . .	6 24		
		83 07	
Pipe and cement, D. W. Lewis . .		3,636 13	
Printing, Cambridge Chronicle Co. .		4 00	
Rope, Harrington, King & Co. . .		72 98	
Ropes, pulleys, etc.: —			
Carson Trench Machine Co. . .		135 20	
Rubber boots and gloves: —			
Robert Josselyn		125 00	
Stock and labor: —			
Water Works Department . .		161 96	
Stone: —			
Waltham Trap Rock Co. . .	$210 46		
Street Department . . .	4 60		
		215 06	
Teaming, sundry persons . . .		2,240 11	
Tide-gate, Barbour-Stockwell Co. .		12 00	
Use of engine and pumps: —			
Geo. E. Worthen	$986 50		
John T. Scully & Bro. . . .	429 00		
		1,415 50	
Use of steam roller, Street Department		25 00	
Total			61,997 27
Surplus of Appropriations relinquished to General Treasury			$6,848 24

SEWER DEPARTMENT — Continued.

MAINTENANCE. (4.10)

Appropriation		$17,500 00

DEPARTMENT RECEIPTS. CARRIED TO GENERAL TREASURY.

For barrels	$8 05
Brass	34 32
Fertilizer	9 00
Hose	12 21
Spruce	4 57
	$68 15

EXPENDED.

For salaries: —			
Superintendent, T. L. Pike	$2,000 00		
Clerk, Mary E. Rowen	390 00		
		$2,390 00	
Labor as per pay-rolls		8,684 87	
Advertising, Press Newspaper Co.		2 10	
Bags, J. Cushing & Co.		90	
Bricks, New England Brick Co.		13 72	
Car tickets: —			
Boston Elevated Railway Co.		45 00	
Cart, Ames Plow Co.		55 37	
Cement, John M. Riley		174 38	
Cleaning catch-basins, John Horigan		3,267 00	
Cleaning drain, Misses Braslan		8 00	
Cleaning sewers, P. J. Healey & Co.		32 50	
Clocks and repairs: —			
A. J. Applegate Co.		23 50	
Cutting catch-basin stones: —			
Austin Ford & Son		19 20	
Damages from overflow of sewer: —			
Louis Bennett	$50 00		
Daniel O'Connell	100 00		
		150 00	
Expressage, Savage & Son		15	
Fuel, Metropolitan Coal Co.		19 60	
Freight, Boston & Maine R. R.		1 15	
Gravel, Jeremiah Sullivan		18 75	
Hardware, tools and repairs, and supplies: —			
E. T. Bynner	$151 72		
Brock Bros.	5 50		
Hall Bros.	1 50		
James Maitland	138 94		
Morss & Whyte	12 38		
C. W. H. Moulton & Co.	4 00		
Daniel J. Sullivan	10 70		
		324 74	
Amounts carried forward		$15,230 93	$17,500 00

SEWER DEPARTMENT, MAINTENANCE — Concluded.

Amounts brought forward . .		$15,230 93	$17,500 00
Harness and repairs, and horse clothing: —			
M. Cavanagh	$55 50		
Wm. H Roberts	11 85		
		67 35	
Hay, grain and straw: —			
J. Cushing & Co.	$86 44		
E. R. Luke & Co.	652 51		
		738 95	
Heating apparatus, Greene & Co. .		8 50	
Horse, Welch & Hall Co. . . .		135 00	
Horse clipping, Ferris & Co. . .		3 00	
Horseshoeing, John F. Gurry & Sons		153 50	
Hose packing, etc.: —			
Boston Woven Hose Co. . . .		125 57	
Iron work: —			
H. J. Shaw	$97 08		
Miller & Shaw	22 15		
		119 23	
Lighting: —			
Cambridge Electric Light Co. .		15 84	
Lumber and cement: —			
Wm. H. Wood & Co.		63 16	
Meal: —			
Chas. James	$13 50		
L. G. Stone	15 00		
		28 50	
Metal, Eastern Expanded Metal Co. .		4 80	
Mill work: —			
J. H. Keenan Co.	$55 54		
H. A. Scranton	13 25		
		68 79	
Oil, Standard Oil Co.		38 23	
Pipe and fittings, D. W. Lewis . .		177 06	
Printing, Cambridge Chronicle Co. .		36 00	
Repairing drain, P. J. Smith . .		6 00	
Repairing registers, etc., T. M. Kenney		9 75	
Rubber goods, Robert Josselyn . .		176 00	
Stationery, City Messenger Dept. .		11 74	
Teaming: —			
P. Biggin	$9 00		
Thos. O'Hara	10 00		
		19 00	
Telephone rent and tolls . . .		42 65	
Wagon and carrriage repairs: —			
F. Ivers & Son	$153 00		
Chas. Waugh & Co.	60 45		
		213 45	
Whitewashing, J. W. Crocker . .		2 00	
Total			17,495 00
Surplus of Appropriation relinquished to General Treasury			$5 00

SINKING FUNDS. (8.2)

CAMBRIDGE BRIDGE.

Appropriation	$4,666 67
EXPENDED.	
Amount paid to the Commissioners of the Sinking Funds for the payment of the Cambridge Bridge loan	4,666 67

CLAY LANDS.

Appropriation	$5,335 00
EXPENDED.	
Amount paid to the Commissioners of the Sinking Funds for the payment of Clay Lands loan	5,335 00

GENERAL.

Appropriation	$111,050 99
EXPENDED.	
Amount paid to the Commissioners of the Sinking Funds for the payment of the City Debt	111,050 99

HARVARD BRIDGE.

Appropriation	$9,500 00
EXPENDED.	
Amount paid to the Commissioners of the Sinking Funds for the payment of the Harvard Bridge loan	9,500 00

IMPROVED SEWERAGE.

Appropriation	$5,747 50
EXPENDED.	
Amount paid to the Commissioners of the Sinking Funds for the payment of the Improved Sewerage loan	5,747 50

STATE AID. (3.9)

Appropriation	$25,500 00
DEPARTMENT RECEIPTS. CARRIED TO GENERAL TREASURY.	
From the Commonwealth of Massachusetts in reimbursement, in part, of the amount the City has advanced, in conformity to the laws of the State, to volunteers and their families, or other dependents of volunteers of the army and navy: —	
Amount carried forward.	$25,500.00

STATE AID — Continued.

Amount brought forward		$25,500 00
For military aid	$640 14	
State aid	13,320 50	
Burials of soldiers and sailors	595 00	
From sundry persons: —		
Aid and board	332 98	
Money uncalled for on pay-rolls	400 50	
	$15,289 12	

EXPENDED.

For salary of Clerk, Chas. L. Russell		$1,100 01	
Military aid	$1,207 00		
State aid	13,282 00		
Soldiers' and sailors' aid	7,352 00		
		21,841 00	
Aid: —			
City of Boston	$39 00		
City of Fall River	19 50		
City of Malden	1 50		
Town of Whitman	30 00		
		90 00	
Board and care: —			
Carney Hospital	$8 57		
Danvers Insane Hospital	84 96		
Medfield Insane Asylum	292 00		
Overseers of the Poor	306 41		
Worcester Insane Asylum	169 46		
Worcester Insane Hospital	521 38		
		1,382 78	
Burials: —			
J. P. Cleary	$35 00		
John W. Coveney	35 00		
Daniel P. Danehy	35 00		
David Fudge & Son	70 00		
Basil F. Hutchins	35 00		
Jos. J. Kelley & Son	140 00		
H. D Litchfield	140 00		
Judson Litchfield	70 00		
C. H. Lockhart	35 00		
James F. Mullen	70 00		
P. H. Rafferty	35 00		
Shea Bros.	35 00		
J. W. & E. F. Skelley	35 00		
W. A. Taylor	35 00		
Wyeth Bros.	35 00		
		840 00	
Carriage hire, M. J. Fairbanks		7 00	
Car tickets: —			
Boston Elevated Railway Co.		30 00	
Cash expended, Chas. L. Russell		7 61	
Amounts carried forward		$25,298 40	$25,500 00

STATE AID — Concluded.

Amounts brought forward . .		$25,298 40	$25,500 00
For fuel: —			
Bay State Fuel Co. . .	$53 18		
Clark Bros.	21 30		
		74 43	
Stationery and printing: —			
City Messenger Department . .	$14 11		
Powell & Co.	85 75		
The Powell Press	2 50		
		102 36	
Supplies, Yerxa & Yerxa . . .		12 00	
Typewriting, E. W. Pike . . .		6 00	
Total			25,493 24
Surplus of Appropriation relinquished to General Treasury			$6 76

STREET DEPARTMENT.

BRIDGES. (4.12)

Appropriation			$3,500 00
EXPENDED.			
For salaries of draw-tenders: —			
John Gaughan	$873 09		
John F. Powers	951 77		
Laborers, as per pay-rolls . .	657 19		
		$2,482 05	
Hardware, Brock Bros. . . .		65 26	
Iron work: —			
Barbour-Stockwell Co. . . .	$16 92		
Miller & Shaw	14 97		
		31 89	
Labor (flagging for employees): —			
Boston & Maine R. R. . . .		31 50	
Lumber: —			
John S. Clary Lumber Co. . .	$81 37		
Geo. W. Gale " " . .	68 53		
E. B. James " " . .	578 02		
Wm. H. Wood & Co. . . .	127 08		
		855 00	
Paint, oil, etc.: —			
H. W. Johns Paint Mfg. Co. . .	$7 20		
Seaboard Paint Co. . . .	14 60		
		21 80	
Sundries		12 50	
Total			$3,500 00

STREET DEPARTMENT — Continued.

CLEANING STREETS. (4.6)

Appropriation		$29,000 00

EXPENDED.

For labor as per pay-rolls		$26,542 07	
Hardware, tools and supplies: —			
Ames Plow Co.	$48 01		
Brock Bros	55 39		
Brock & Eaton	19 00		
E. T. Bynner	83 00		
Steel Clad Reversible Broom Co.	7 00		
		212 40	
Hay, grain and straw: —			
Otis S. Brown & Co.	$88 47		
J. Cushing & Co.	1,745 04		
		1,833 51	
Refilling sweeper brooms: —			
Chapman & Soden	$5 00		
Wilkens Bros	141 74		
Sundry persons	1 74		
		148 48	
Sundries		3 42	
Sweeping machine repairs: —			
Barbour-Stockwell Co.	$36 09		
G. W. Brady	67 66		
Brock Bros.	13 44		
Charlton Street Sweeper	23 25		
Dodge, Haley & Co.	13 65		
Durnin, McLaughlin & Co.	6 52		
Edson Manufacturing Co.	6 17		
A. H. Hews & Co.	7 83		
Miller & Shaw	74 87		
Wm. C. Oastler	8 35		
Sundry persons	8 63		
		266 46	
Teaming, sundry persons		901 91	
Waste barrels: —			
American Stave and Cooperage Co.		125 00	
Total			30,033 25
Excess of Expenditures over Appropriation			$1,033 25
Transfers to this Department from Broadway		$198 20	
" " " " Cambridge Street		835 27	
			1,033 47
Balance relinquished to General Treasury			22

STREET DEPARTMENT — Continued.

COLLECTION OF ASHES. (4.9)

Appropriation			$29,000 00
EXPENDED.			
For salary of foreman	$833 25		
Labor as per pay-rolls	23,641 51		
		$24,474 76	
Bicycle repairs, J. L. Moseley		17 90	
Harness and repairs: —			
M. Cavanagh	$47 00		
Jas. Forgie & Son	236 60		
Hugh McCaffrey	36 98		
		320 58	
Hay, grain and straw: —			
J. Cushing & Co.		3,861 21	
Horse and cart covers: —			
Geo. T. Hoyt & Co.		37 50	
Horseshoeing, Wm. Balmer		2 25	
Teaming, sundry persons		62 50	
Wagon and cart repairs: —			
Brock Bros.	$22 15		
G. W. Burditt	9 35		
Dodge, Haley & Co.	12 32		
Geo W. Gale Lumber Co.	27 83		
Murphy Varnish Co.	73 00		
Shadbolt Mfg. Co.	35 58		
H. J. Shaw	36 66		
Sundry persons	5 85		
		222 74	
Total			28,999 44
Surplus of Appropriation relinquished to General Treasury			56

CONSTRUCTION, BELMONT STREET. (4.2)

Appropriation			$1,235 14
EXPENDED.			
For labor as per pay-rolls		$885 67	
Cement, Geo. W. Gale Lumber Co.		11 00	
Gravel: —			
Smith D. Baxter	$12 20		
John McGinnis	12 50		
		24 70	
Oil, Standard Oil Co.		6 38	
Rent of land, Richard M Orr		15 00	
Stone, S. & R J. Lombard		203 28	
Teaming, sundry persons		67 50	
Use of track, Mass. Broken Stone Co.		19 00	
Total			1,232 53
Surplus of Appropriation relinquished to General Treasury			$2 61

STREET DEPARTMENT — Continued.

CONSTRUCTION, DUDLEY STREET. (4.2)

Appropriation			$3,500 00
EXPENDED.			
For labor as per pay-rolls		$1,127 48	
Fuel, Bay State Fuel Co.		46 68	
Grain and straw, J. Cushing & Co.		130 25	
Gravel, freight and loading: —			
Boston & Maine R R.		16 00	
Oil, Standard Oil Co.		8 55	
Stone: —			
Cracked stone: —			
Waltham Trap Rock Co.	$304 14		
Edgestone, S. & R. J. Lombard	956 78		
Field stone, sundry persons	707 78		
Paving blocks, S. & R J. Lombard	117 18		
		2,085 88	
Teaming, sundry persons		85 00	
Total			3,499 84
Surplus of Appropriation relinquished to General Treasury			16

CONSTRUCTION, GRANITE STREET. (4.2)

Appropriation			$3,191 31
EXPENDED.			
For labor as per pay-rolls		$51 50	
Gravel, David O'Mara		25 56	
Stone Waltham Trap Rock Co.		47 06	
Vitrified bricks, Ferris Brick Co.		262 44	
Total			386 56
Surplus of Appropriation			$2,804 75
Transfer from this Department to Street Department, Sundry Streets, Wards 6 and 7			2,800 00
Balance relinquished to General Treasury			$4 75

CONSTRUCTION, MUNROE STREET. (4.2)

Appropriation			$4,000 00
EXPENDED.			
For labor as per pay-rolls		$1,080 26	
Gravel, freight and loading: —			
Boston & Maine R. R.	$17 10		
James Gray	102 90		
		120 00	
Amounts carried forward		$1,200 26	$4,000 00

STREET DEPARTMENT, CONSTRUCTION, MUNROE STREET — Concluded.

Amounts brought forward		$1,200 26	$4,000 00
For stone: —			
Cracked stone: —			
Waltham Trap Rock Co.	$25 03		
Edgestone, S. & R. J. Lombard	2,772 78		
		2,797 81	
Total			3,998 07
Surplus of Appropriation relinquished to General Treasury			$1 93

CONSTRUCTION, PLEASANT STREET. (4.2)

Appropriation			$2,347 50
EXPENDED.			
For labor as per pay rolls		$1,089 16	
Gravel, Jere. Sullivan		435 60	
Stone: —			
Edgestone, S. & R. J. Lombard	$63 62		
Flagging, S & R. J. Lombard	37 87		
		101 49	
Teaming, sundry persons		721 25	
Total			$2,347 50

CONSTRUCTION, REED STREET. (4.2)

Appropriation			$8,000 00
EXPENDED.			
For labor as per pay-rolls		$1,283 73	
Gravel, freight and loading: —			
Boston & Maine R. R.		$32 00	
Hay and grain. J. Cushing & Co.		68 32	
Oil, Standard Oil Co.		10 45	
Stone: —			
Cracked stone: —			
Waltham Trap Rock Co.	$964 24		
Edgestone, S. & R. J. Lombard	1,301 19		
		2,265 43	
Teaming, sundry persons		85 00	
Vitrified bricks, Wm. C. Norcross Co.		252 00	
Total			$3,996 93
Surplus of Appropriation			$4,003 07
Transfer from this Department to Street Department, Construction Sundry Streets, Ward 11			4,000 00
Balance relinquished to General Treasury			$3 07

STREET DEPARTMENT — Continued.

CONSTRUCTION, SHERMAN STREET. (4.2)

Appropriation			$9,500 00
EXPENDED.			
For labor as per pay rolls		$2,586 92	
Gravel, freight and loading: —			
Boston & Maine R. R.	$228 51		
Antoni Leonard	82 50		
		311 01	
Oil, Standard Oil Co.		11 70	
Stone: —			
Edgestone, S. & R. J. Lombard	$909 79		
Granite flagging: —			
S. & R. J. Lombard	35 00		
Granite paving blocks: —			
S. & R. J. Lombard	5,220 60		
		6,165 39	
Teaming, sundry persons		421 88	
Total			9,496 90
Surplus of Appropriation relinquished to General Treasury			$3 10

CONSTRUCTION, SUNDRY STREETS, WARDS 6 AND 7. (4.2)

Appropriation			$3,250 00
EXPENDED.			
For labor as per pay rolls		$1,711 21	
Edgestone, S & R. J Lombard		744 39	
Field stone, sundry persons		575 30	
Filling, Thomas O'Hara		56 25	
Gravel, Jere. Sullivan		158 00	
Total			$3,245 15
Surplus of Appropriation relinquished to General Treasury			$4 85

CONSTRUCTION, SUNDRY STREETS, WARD 11. (4.2)

Appropriation			$4,000 00
EXPENDED.			
For labor as per pay rolls		$2,537 51	
Freight, Boston & Maine R. R.		58 80	
Fuel, Bay State Fuel Co.		93 82	
Gravel and filling: —			
John McGinnis	$13 00		
Patrick Reidy	24 00		
John M. Riley	117 50		
		154 50	
Hay, grain, etc., J Cushing & Co.		191 11	
Oil, Standard Oil Co.		21 00	
Amounts carried forward		$3,056 74	$4,000 00

STREET DEPARTMENT, CONSTRUCTION, SUNDRY STREETS, WARD 11 — Concluded.

Amounts brought forward		$3,056 74	$4,000 00
For stone: —			
Ballast: —			
Jere. O'Keefe	$88 00		
John M. Riley	5 00		
Cracked stone: —			
Waltham Trap Rock Co.	840 17		
		933 17	
Total			3,989 91
Surplus of Appropriation relinquished to General Treasury			$10 09

CONSTRUCTION, WRIGHT STREET. (4.2)

Appropriation			$1,600 00
EXPENDED.			
For labor as per pay rolls		$580 89	
Oil, Standard Oil Co.		8 50	
Stone: —			
Edgestone, S. & R. J. Lombard		282 99	
Teaming, sundry persons		15 00	
Vitrified blocks, Ferris Brick Co.		262 44	
Total			1,149 82
Surplus of Appropriation			$450 18
Transfer from this Department to Sundry Streets, Wards 6 and 7			450 00
Balance relinquished to General Treasury			18

STREET DEPARTMENT — MAINTENANCE.

SALARY OF SUPERINTENDENT AND CLERICAL ASSISTANCE. (4.1)

Appropriation			$4,000 00
EXPENDED.			
For salaries of: —			
Superintendent, Chas. A. Brown		$2,000 00	
Clerks: —			
Geo. M. Clukas		1,456 00	
Maud E. Foster		329 25	
Imogene B. Hixon		150 00	
Georgie W. Sanborn		263 00	
Total			4,198 25
Excess of Expenditures over Appropriation			$198 25
Transfer to this Department from General Expenses			200 00
Balance relinquished to General Treasury			$1 75

STREET DEPARTMENT, MAINTENANCE — Continued.

MACADAMIZING, RESURFACING AND REPAIRING STREETS, AND GENERAL EXPENSES. (4.3)

Appropriation	$66,000 00
Revenue appropriated	322 38
	$66,322 38

DEPARTMENT RECEIPTS. CARRIED TO GENERAL TREASURY.

For Apples	$14 00
Board	494 25
Cart	50 00
Dump	40 00
Horses	142 50
Horseshoeing	153 70
Labor and materials	427 75
Manure	160 00
Old iron	52 20
Permit fees	29 50
Plank	5 00
Scrapings	126 90
Steam roller	518 25
Stone	99 80
Stone dust	23 77
Sundries	4 93
Use of team	5 00
Wagon	5 00
	$2,352 55

GENERAL EXPENSES.

	EXPENDED.		
For district foremen: —			
E Osborn	$1,256 00		
J. A. Sheridan	1,254 00		
Laborers, as per pay rolls	35,129 08		
Injured employees, paid for lost time	250 50		
		$37,889 58	
Barrels, Wm. Welch		7 00	
Carriages and wagons repaired: —			
Acme Road Machinery Co.	$1 90		
Duff Spring Co.	5 25		
F. Ivers and Son	81 70		
Chas. Waugh & Co.	12 35		
		101 20	
Carriage hire: —			
F. P. Merrill	$1 50		
Chas Waugh & Co	9 00		
Whiting & Prescott	2 50		
G. W. Worster	5 25		
		18 25	
Car tickets: —			
Boston Elevated Railway Co.		20 00	
Amounts carried forward		$38,036 03	$66,322 38

STREET DEPARTMENT, MAINTENANCE, GENERAL EXPENSES — Continued

Amounts brought forward		$38,036 03	$66,322 38
For cash expended for sundries: —			
Chas. A. Brown		19 56	
Fuel: —			
Bay State Fuel Co.	$1,023 93		
Metropolitan Coal Co.	465 24		
		$1,489 17	
Gravel, freight and loading: —			
Smith D Baxter	$20 40		
Boston & Maine R. R.	44 81		
John McGinniss	18 25		
Wm. B. Mullen	32 30		
Francis Pratt	36 48		
Edw. F. Sprague	199 25		
Joshua Stone	103 95		
		455 44	
Hardware, tools, etc.: —			
Jos. Breck & Sons	$29 00		
Brock Bros	72 40		
G W Burditt	55 12		
E. T. Bynner	34 71		
Dodge, Haley & Co.	212 77		
Durnin, McLaughlin & Co.	192 66		
Sundry persons	4 16		
Daniel J Sullivan	36 40		
Union Glass Co.	15 53		
F. A. White	23 74		
		676 49	
Harness (new and repairs) and horse clothing: —			
Breck Bros	$6 75		
M. Cavanagh	83 65		
Jos. Cogan	38 00		
Jas Curry	71 95		
Jas. Forgie & Son	58 00		
John H. Fuller	120 50		
John J. Hawkes	55 85		
F. Ivers & Son	114 45		
Hugh McCaffrey	110 57		
Jos. A. Ryan	56 15		
		715 87	
Hay, grain and straw: —			
Otis S. Brown & Co.	$93 06		
J. Cushing & Co.	7,161 03		
L G. Stone	19 00		
		7,273 09	
Horses: —			
P. H. Dardis	$382 50		
H. K Parsons & Co.	225 00		
		607 50	
Horseshoeing stock: —			
Dodge, Haley & Co.	$158 98		
Durnin McLaughlin & Co.	224 49		
Jas. Forgie & Son	42 50		
		425 97	
Inspecting boilers, S. C. Baxter		10 00	
Amounts carried forward		$49,709 12	$66,322 38

STREET DEPARTMENT, MAINTENANCE, GENERAL EXPENSES — Continued

Amounts brought forward		$49,709 12	$66,322 38
For lighting: —			
Cambridge Electric Light Co.		433 50	
Lumber: —			
Geo. W. Gale Lumber Co.	$46 42		
Wm. H. Wood & Co.	21 93		
		68 35	
Office expenses: —			
Advertising and printing: —			
Press Newspaper Co.	$59 30		
Books, stationery, etc.: —			
Brooks Bank Note Co.	12 45		
City Messenger Department	72 43		
Cotton & Gould	77 36		
Sundry persons	9 85		
Wm. E Toner	24 00		
Printing: —			
Cambridge Chronicle Co.	15 00		
Cambridge Times	21 00		
J. A. Cummings Printing Co.	30 44		
J. Frank Facey	54 00		
Edw. W. Wheeler	11 75		
Stamps, Pneumatic Hand Stamp Co.	7 05		
Telephone rent and tolls	310 35		
		704 98	
Oils, paints, etc.: —			
Brock Bros.	$47 75		
G. W. Burditt	17 46		
Butchers' Slaughtering and Melting Association	7 00		
E. T. Bynner	26 85		
Chas. A Claflin & Co.	53 42		
W. A Morrison	39 24		
Standard Oil Co.	24 69		
F. A. White	9 60		
W. A. Wood Co.	33 40		
		259 41	
Placing halliards, H. H. Brandt		21 00	
Stable repairs: —			
Electrical work: —			
Electrical Department, Wires	$5 56		
Hardware and supplies: —			
Jos. Breck & Sons	4 80		
Brock Bros.	20 87		
G. W. Burditt	5 30		
Burditt & Williams Co.	15 88		
Lumber: —			
Geo. W. Gale Lumber Co.	175 50		
Wm. H Wood & Co.	2 86		
Mill work, Ira G. Hersey	5 91		
Amounts carried forward	$236 68	$51,196 36	$66,322 38

STREET DEPARTMENT, MAINTENANCE, GENERAL EXPENSES — Continued.

Amounts brought forward	$236 68	$51,196 36	$66,322 38
For plumbing: —			
Brock & Eaton	409 76		
Moynahan & Co	10 75		
Repairing asphalt, Simpson Bros.	28 00		
Repairing scales: —			
The Fairbanks Co.	10 50		
Priest, Page & Co.	33 85		
Roof repairs, H. F. Peak	5 50		
		735 04	
Stable supplies: —			
Brooms, A. M Loker	$25 00		
Disinfectant, Read Holliday & Sons	32 76		
Hardware, tools and supplies: —			
Brock Bros.	79 68		
Brock & Eaton	18 13		
G. W. Burditt	30 00		
E. T. Bynner	118 85		
John H. Fuller	14 60		
Hayden & Co.	49 95		
Wm. B. Hunt & Co.	6 75		
F. P. Merrill	42 58		
Sundry persons	7 68		
Lumber: —			
John S. Clary Lumber Co.	72 29		
Wm. H. Wood & Co.	10 58		
Salt bricks, Chas. W. Sabin	12 90		
Sponges, A. Moses, Sons & Co	25 46		
		547 21	
Steam roller, repairs and supplies: —			
Barbour, Stockwell Co.	$18 99		
Boston Woven Hose Co	11 75		
Brock Bros.	47 80		
Chas. A. Claflin & Co.	187 29		
Dutton & McLean	45 90		
W. H. Gallison Co.	6 00		
A. H. Hews & Co.	229 56		
Edw. Kendall & Sons	83 45		
Miller & Shaw	45 03		
H. J. Shaw	77 05		
Sundry persons	4 00		
Whittier Machine Co.	257 88		
		1,014 70	
Stone crusher, repairs and supplies: —			
Boston Belting Co.	$6 63		
Boston & Maine R. R. (freight)	6 78		
Brock Bros.	15 92		
Chas. A. Claflin & Co.	71 15		
Farrell Foundry and Machine Co	95 43		
Good Roads Machinery Co.	28 00		
A. H. Hews & Co.	19 21		
Amounts carried forward	$243 12	$53,493 31	$66,322 38

STREET DEPARTMENT, MAINTENANCE, GENERAL EXPENSES — Concluded.

Amounts brought forward	$243 12	$53,493 31	$66,322 38
For Edw. Kendall & Sons	44 57		
Miller & Shaw	59 25		
Steele & Condict	109 17		
Taylor Iron and Steel Co.	198 60		
Wm. H. Wood & Co.	16 73		
		671 44	
Stone: —			
Cracked stone: —			
Massachusetts Broken Stone Co.	$59 96		
Waltham Trap Rock Co.	3,063 62		
Field stone, sundry persons	7,160 35		
Granite chips, Sweatt & Gould	4 50		
		10,288 43	
Street signs: —			
Gold leaf, F. A. White	$5 55		
Lumber: —			
John S. Clary Lumber Co.	173 34		
Geo. W. Gale " "	25 83		
		204 72	
Sundries		22 98	
Teaming, sundry persons		1,435 63	
Total			66,116 51
Surplus of Appropriation			$205 87
Transfer from this Department to Salaries			200 00
Balance relinquished to General Treasury			$5 87

STREET DEPARTMENT.

PAVING, CROSSINGS AND REPAIRS. (4.4)

Appropriation			$10,000 00
EXPENDED.			
For labor as per pay rolls		$8,076 24	
Bricks and freight on same: —			
New England Brick Co.		198 72	
Cement: —			
John M. Riley	$179 50		
Waldo Bros.	44 40		
Wm. H. Wood & Co.	100 30		
		324 20	
Globes, Union Glass Co.		24 25	
Gravel, freight and loading: —			
Boston & Maine R. R.	$119 53		
Antoni Leonard	28 50		
		148 03	
Oil, Standard Oil Co.		26 13	
Paving blocks, S. & R. J. Lombard		338 12	
Amounts carried forward		$9,135 69	$10,000 00

STREET DEPARTMENT, PAVING, CROSSINGS AND REPAIRS — Concluded.

Amounts brought forward . .		$9,135 69	$10,000 00
For re-cutting paving blocks: —			
Jeremiah Hagerty	$85 13		
Thomas Walsh	92 91		
		178 04	
Repairs to artificial stone sidewalks: —			
Simpson Bros. Corporation . .		29 10	
Teaming, sundry persons . . .		655 02	
Total			9,997 85
Surplus of Appropriation relinquished to General Treasury			$2 15

PAVING, EDGESTONES AND SIDEWALKS (4.4)

Appropriation	$25,000 00

DEPARTMENT RECEIPTS. CARRIED TO GENERAL TREASURY.

For edgestones and sidewalk assessments	$9,965 45
Labor and materials . . .	490 66
	$10.456 11

EXPENDED.

For labor as per pay rolls . . .		$10,740 46	
Abatement of sidewalk assessment: —			
Michael and Wm. Kelly . . .		15 42	
Artificial stone sidewalks: —			
Thos. J. Hind	$22 68		
Patrick J. Lyons	1,067 80		
Simpson Bros. Corporation . .	461 79		
Warren Bros. Co.	298 28		
		1,850 46	
Bricks, and freight on same: —			
Boston & Maine R. R. . . .	$120 40		
New England Brick Co. . . .	561 60		
		682 00	
Edgestones, S. & R. J. Lombard .		9,091 30	
Globes, Union Glass Co. . . .		74 10	
Gravel, freight and loading: —			
Boston & Maine R. R. . . .	$313 44		
Jas. Culhane	100 25		
J. M. Fimberg	8 50		
Antoni Leonard	84 00		
John McGuinness	16 25		
Isaac McLean	5 80		
Jere Sullivan	90 00		
		618 24	
Hardware, tools, etc.: —			
Brock Bros.	$142 37		
Brock & Eaton	22 00		
Amounts carried forward . . .	$164 37	$23,071 98	$25,000 00

STREET DEPARTMENT, PAVING, EDGESTONES AND SIDEWALKS — Concluded.

Amounts brought forward . .	$164 37	$23,071 98	$25,000 00
For E. T. Bynner	23 00		
Dodge, Haley & Co. . . .	9 44		
Steel Clad Reversible Broom Co. .	33 53		
Bruce R. Ware & Co. . . .	15 20		
		245 54	
Hay, grain and straw, J. Cushing & Co.		107 20	
Lumber: —			
John S. Clary Lumber Co. . .	$22 69		
Geo. W. Gale " " . .	14 71		
		37 40	
Oil, Standard Oil Co.		48 80	
Sundries		4 65	
Teaming, sundry persons . . .		1,484 38	
Total			24,999 95
Surplus of Appropriation relinquished to General Treasury			05

REBUILDING BRIDGE STREET. (4.3)

Appropriation	$2,044 32
Additional appropriation	7,000 00
	$9,044 32

EXPENDED.

For labor as per pay rolls . . .		$612 43	
Granite paving blocks: —			
S. & R. J. Lombard		6,321 16	
Gravel, freight and loading: —			
Boston & Maine R. R. . . .	$46 39		
Antoni Leonard	6 00		
		52 39	
Teaming, sundry persons . . .		45 00	
Total			7,030 98
Surplus of Appropriation			$2,013 34
Transfer from this Department to Broadway . .			2,013 32
Balance relinquished to General Treasury . . .			02

REBUILDING BROADWAY. (4.3)

Appropriation	$2,000 00

EXPENDED.

For labor as per pay rolls . . .		$1,084 36	
Gravel, freight and loading: —			
Boston & Maine R. R. . . .	$88 77		
Antoni Leonard	84 00		
		172 77	
Oil, Standard Oil Co.		4 25	
Amounts carried forward . . .		$1,261 38	$2,000 00

STREET DEPARTMENT, REBUILDING BROADWAY — Concluded.

Amounts brought forward		$1,261 38	$2,000 00
For stone: —			
Edgestone, S. & R. J. Lombard	$46 76		
Flagging, S. & R. J. Lombard	37 94		
Granite paving blocks: —			
S. & R. J. Lombard	2,487 10		
		2,571 80	
Teaming, sundry persons		348 13	
Total			$4,181 31
Excess of Expenditures over Appropriation			$2,181 31
Transfers to this Department: —			
From Rebuilding Bridge Street.		$2,013 32	
" " Harvard Square		366 19	
			2,379 51
			$198 20
Transfer from this Department to Cleaning Streets			198 20

REBUILDING BROOKLINE STREET. (4.3)

Appropriation			$10,000 00
EXPENDED.			
For labor as per pay rolls		$3,986 97	
Cement: —			
D. W. Lewis	$209 00		
J. M Riley	282 00		
W. H. Wood & Co.	486 20		
		977 20	
Fuel, Metropolitan Coal Co.		27 80	
Gravel, freight and loading: —			
Boston & Maine R. R.	$1,727 88		
Antoni Leonard	114 15		
		1,842 03	
Hay and grain, J. Cushing & Co.		398 60	
Lanterns, Brock Bros		27 50	
Lumber, Geo. W. Gale Lumber Co.		31 26	
Oil, Standard Oil Co.		25 08	
Road pitch, N. E. Felt Roofing Works		69 48	
Stone: —			
Cracked stone: —			
Waltham Trap Rock Co.	$184 76		
Concrete stone. John O'Brien	309 80		
Flagging, S. & R. J. Lombard	94 99		
		589 55	
Sundries		4 22	
Amounts carried forward		$7,979 69	$10,000 00

STREET DEPARTMENT, REBUILDING BROOKLINE STREET — Concluded.

Amounts brought forward		$7,979 69	$10,000 00
For use of steam roller: —			
H. J. Shaw	$5 55		
Warren Bros. & Co.	70 00		
		75 55	
Vitrified blocks: —			
Johnsonburg Vitrified Brick Co.		1,938 74	
Total			9 993 98
Surplus of Appropriation relinquished to General Treasury			$6 02

REBUILDING CAMBRIDGE STREET. (4.3)

Appropriation			$5,000 00
EXPENDED.			
For labor as per pay rolls		$3,328 69	
Gravel, freight and loading: —			
Boston & Maine R. R.	$244 02		
James Connell	41 15		
Antoni Leonard	96 00		
		381 17	
Hay, grain, etc., J Cushing & Co.		115 02	
Oil, Standard Oil Co.		11 90	
Stone: —			
Flagging, S. & R. J. Lombard		327 95	
Total			4,164 73
Surplus of Appropriation			$835 27
Transfer from this Department to Cleaning Streets			835 27

REBUILDING FRANKLIN STREET. (4.3)

Appropriation			$5,000 00
EXPENDED.			
For labor as per pay rolls		$1,575 31	
Gravel, freight and loading: —			
Boston & Maine R. R.	$18 48		
Jeremiah Sullivan	290 00		
		308 48	
Hay and grain, J. Cushing & Co.		31 68	
Stone: —			
Edgestone, S. & R. J. Lombard	$11 46		
Flagging, S. & R. J. Lombard	19 11		
Amounts carried forward	$30 57	$1,915 47	$5,000 00

STREET DEPARTMENT, REBUILDING FRANKLIN STREET — Concluded.

Amounts brought forward	$30 57	$1,915 47	$5,000 00
For granite paving blocks: —			
S. & R. J. Lombard	2,744 74		
		2,775 31	
Teaming, sundry persons		306 25	
Total			4,997 03
Surplus of Appropriation relinquished to General Treasury			$2 97

REBUILDING RIVER STREET. (4.3)

Appropriation			$10,000 00

EXPENDED.

For labor as per pay rolls		$4,555 96	
Cement: —			
D. W. Lewis	$291 50		
J. M. Riley	268 00		
Windsor Cement Co.	490 60		
		1,050 10	
Concrete stone, John O'Brien		374 00	
Gravel, freight and loading: —			
Boston & Maine R. R	$60 18		
James Gray	72 00		
		132 18	
Hose, etc., Brock Bros.		43 22	
Lumber, Geo. W. Gale Lumber Co.		34 84	
Road pitch: —			
New England Felt Roofing Works		46 26	
Tools and supplies, F. A. White		17 20	
Vitrified blocks, and freight on same: —			
Boston & Maine R. R.	$1,780 26		
Johnsonburg Vitrified Brick Co.	1,965 98		
		3,746 24	
Total			$10,000 00

WATERING STREETS. (4.8)

Appropriation			$29,000 00

Department Receipts. Carried to General Treasury.

For assessments	$16,422 80		
Collections	1,372 75		
	$17,795 55		
Amount carried forward			$29,000 00

STREET DEPARTMENT, WATERING STREETS — Concluded.

Amount brought forward . .			$29,000 00
EXPENDED.			
For salary of foreman		$1,006 50	
Clerical assistance in levying assessments		156 77	
Bicycle repairs, J. L. Moseley . .		28 35	
Concord wagon, F. Ivers & Son .		150 00	
Hay and grain, J. Cushing & Co. .		87 72	
Hose, etc., Boston Woven Hose Co.		30 51	
Stand-pipe repairs: —			
Brock Bros	$17 92		
Water Works Department . .	228 43		
		246 35	
Sponges, A. Moses. Sons & Co. .		25 46	
Sprinkling streets by contracts . .		24,299 68	
Use of buggy, F. Ivers & Son . .		24 00	
Use of water: —			
Boston Packing & Provision Co. .		25 00	
Watering cart repairs: —			
Labor		1,544 96	
Hardware, iron, etc.: —			
Abbot-Downing Co . . .	$18 80		
Barbour-Stockwell Co. . .	26 10		
Brock Bros.	12 47		
Dodge, Ilaley & Co. . . .	171 39		
Durnin, McLaughlin & Co. . .	2 20		
Lumber and mill work: —			
Geo. W. Gale Lumber Co. . .	35 42		
Ira G. Hersey	31 05		
Paints, oils, varnish, etc.: —			
Brock Bros.	176 98		
E. T. Bynner	109 45		
Murphy Varnish Co. . . .	148 50		
Wadsworth. Howland & Co. .	19 02		
Waterproof Paint Co. . . .	30 00		
Sundry persons	6 80		
Springs, Duff Spring Co. . .	115 91		
Tanks, attachments, etc.: —			
American Stave & Cooperage Co.	222 50		
J. L. & H. K. Potter . . .	246 84		
		2,918 39	
Total			28,998 73
Surplus of Appropriation relinquished to General Treasury			$1 27

TREASURY DEPARTMENT.

SALARIES AND CLERICAL ASSISTANCE. (1.4)

Appropriation		$10,250 00
EXPENDED.		
For salaries of: —		
City Treasurer, Wm W. Dallinger	$3,000 00	
Clerks: —		
E. G. Stevens	1,560 00	
E. J. Howlett	1,248 00	
J. H. Webber	1,248 00	
C. H. Dodge	936 00	
P. B. Dallinger	728 00	
E. E. Estes	780 00	
Temporary clerks	859 33	
Total		10,359 33
Excess of Expenditures over Appropriation		$109 33
Transfer to this Department from General Expenses		125 00
Balance relinquished to General Treasury		$15 67

GENERAL EXPENSES. (1.4)

Appropriation			$5,250 00
DEPARTMENT RECEIPTS. CARRIED TO GENERAL TREASURY.			
For fees from sundry persons, as follows: —			
Advertising	$620 13		
Deeds	292 00		
Descriptions	461 50		
Posting	306 20		
Recording	24 50		
Tax summonses	1,227 00		
	$2,931 33		
EXPENDED.			
For advertising: —			
Boston Daily Advertiser Co.	$25 00		
Press Newspaper Co.	683 10		
		$708 10	
Boxes, Seavey Manufacturing Co.		7 75	
Carriage hire, M. J. Fairbanks		504 00	
Car tickets: —			
Boston Elevated Railway Co.		35 00	
Commissions for collecting taxes: —			
Jas. A. Brown	$74 65		
John Foster	11 30		
Joseph Fox	706 60		
Warren Ivers	813 44		
		1,605 99	
Amounts carried forward		$2,860 84	$5,250 00

TREASURY DEPARTMENT, GENERAL EXPENSES — Concluded.

Amounts brought forward		$2,860 84	$5,250 00
For directories: —			
W. A. Greenough & Co.	$3 00		
E. F. Hunt & Co.	3 00		
Sampson, Murdock & Co.	6 00		
		12 00	
Official bond, Wm. A. Muller		160 00	
Postage, F. M. Small		1,096 50	
Recording deeds, E. O. Childs		44 00	
"Revised Laws," Commonwealth of Massachusetts		6 00	
Stationery, printing, etc.: —			
American Bank Note Co.	$175 00		
Lyman B. Brooks	34 00		
Cambridge Times	6 50		
Carter, Rice & Co.	30 77		
City Messenger Department	37 75		
Wm. H. Claflin & Co.	28 50		
Co-operative Press	122 00		
Cotton & Gould	19 45		
J. A. Cummings Printing Co.	9 78		
John H. Ford	177 37		
E. W. S. Jones	44 00		
Louis F. Weston	16 00		
John Wilson & Son	15 00		
		716 12	
Subscription, Geo. E. French		6 00	
Sundries		5 26	
Telephone rent and tolls		112 80	
Total			5,019 52
Surplus of Appropriation			$230 48
Transfer from this Department to Salaries			125 00
Balance relinquished to General Treasury			$105 48

WATER WORKS.

CONSTRUCTION, GENERAL. (5.1)

Appropriation	$12,000 00
Additional appropriation	5,000 00
	$17,000 00

Department Receipts. Carried to General Treasury.

For labor and materials	$705 64	
Pipe	43 86	
Premium on bonds	724 65	
	$1,474 15	
Amount carried forward		$17,000 00

WATER WORKS. CONSTRUCTION, GENERAL — Continued.

Amount brought forward . .			$17,000 00
EXPENDED.			
For advertising and printing: —			
Press Newspaper Co. . . .		$6 40	
Bricks, New England Brick Co. .		21 60	
Cement, etc., J. Cushing & Co. . .		86 10	
Cracked stone: —			
Waltham Trap Rock Co. . .		5 05	
Expressage: —			
Dodge Express Co. . . .	$40 74		
Sundry persons	1 50		
		42 24	
Field stone, sundry persons . .		29 17	
Frames, covers and cast iron specials: —			
Barbour, Stockwell Co. . . .	$49 50		
Builders Iron Foundry . . .	353 43		
Chapman Valve Mfg. Co. . .	1,081 00		
Ludlow Valve Mfg Co. . . .	34 50		
Norwood Engineering Co. . .	110 58		
Waltham Foundry Co. . . .	6 66		
		1,635 67	
Freight: —			
Boston & Albany R. R. . . .	$40 00		
Boston & Maine R. R. . . .	6 35		
		46 35	
Hardware, tools and repairs, and supplies: —			
Jos. Breck & Sons	$11 55		
James Maitland	9 94		
Sundry persons	5 40		
		26 89	
Labor as per pay-rolls . . .		7,139 13	
Land and damage: —			
Thos. H. Armstrong . . .		200 00	
Lanterns, Globe Gas Light Co. . .		9 50	
Lead, Waite, Ranlet & Co. . .		274 32	
Lumber and cement: —			
Geo. W. Gale Lumber Co. . .	$109 78		
E. D. Sawyer " " . .	23 45		
		133 23	
Meter connections and fittings: —			
Davis & Farnum Manufacturing Co.	$25 45		
Hersey Manufacturing Co. . .	35 65		
Neptune Meter Co.	1,847 40		
A. P. Smith Manufacturing Co. .	50 60		
Walworth Manufacturing Co. .	463 07		
		2,422 17	
Packing, Harrington, King & Co. .		73 75	
Amounts carried forward . . .		$12,151 57	$17,000 00

WATER WORKS. CONSTRUCTION, GENERAL — Concluded.

Amounts brought forward . .		$12,151 57	$17,000 00
For pipe and cement: —			
D. W. Lewis	$25 57		
Warren Foundry and Machine Co. .	4,770 67		
		4,796 24	
Sundries		2 93	
Traps: —			
Boston Double Catch Basin, Sewer and House Trap Co. . . .		8 40	
Use of roller, Street Department .		40 00	
Total			$16,999 14
Surplus of Appropriation relinquished to General Treasury			86

CONSTRUCTION. FRESH POND. (5.1)

Appropriation			$10,000 00
EXPENDED.			
For bricks, New England Brick Co. .		$12 06	
Car tickets: —			
Boston Elevated Railway Co. .		10 00	
Hardware, tools and repairs, and supplies: —			
Jos. Breck & Sons	$23 20		
J. D. Jewett Co.	71 07		
James Maitland	7 94		
		102 21	
Labor as per pay rolls . . .		5,682 66	
Lumber and mill work: —			
Geo W. Gale Lumber Co. . .		19 99	
Staking and grading: —			
French & Bryant		156 70	
Sundries		8 78	
Teaming, sundry persons . . .		3,977 95	
Work on catch-basins: —			
Samuel McCulloch		26 50	
Total			9,996 85
Surplus of Appropriation relinquished to General Treasury			$3 15

Note. For summary of Water Department accounts showing receipts, expenditures and balances carried forward or paid into Sinking Fund see page 418.

WATER WORKS — Continued.

CONSTRUCTION. HOBB'S BROOK ACCOUNT. GENERAL. (5.1)

Appropriation			$3,500 00
EXPENDED.			
For bricks and cement: —			
G. F. Frost		$24 50	
Building drain, etc., John M. Riley		2,701 36	
Drain work, etc.: —			
Arthur L. Hersum	$41 05		
C. L. Keefe	31 57		
		72 62	
Drilling and blasting: —			
Waltham Trap Rock Co.		7 00	
Dynamite, fuse, etc.: —			
Massachusetts Broken Stone Co.		31 65	
Hardware, tools and supplies: —			
J. A. Higgins		52 60	
Labor as per pay rolls		270 64	
Lumber: —			
Geo. J. Barker Lumber Co.		34 86	
Mason work, Jas. E. Burke		91 95	
Pipe, lime and cement: —			
C. L Keefe	$20 49		
D. W. Lewis	132 21		
		152 70	
Sundries		8 30	
Teaming, sundry persons		34 65	
Total			3,482 83
Surplus of Appropriation relinquished to General Treasury			$17 17

CONSTRUCTION. HOBB'S BROOK ACCOUNT. LAND SETTLEMENTS. (5.1)

Appropriation			$2,000 00
EXPENDED.			
For expenses of witnesses: —			
Henry C. Jones		$8 62	
Land and damage: —			
Nathan Warren, et al		1,800 00	
Amounts carried forward		$1,808 62	$2,000 00

WATER WORKS. CONSTRUCTION, HOBB'S BROOK ACCOUNT, LAND SETTLEMENTS — Concluded.

Amounts brought forward . .	$1,808 62	$2,000 00
For recording deeds and filing plan: —		
E. O. Childs	6 15	
Services, C. S. Wheeler . . .	150 00	
Total		1,964 77
Surplus of Appropriation relinquished to General Treasury		$35 23

CONSTRUCTION. HOBB'S BROOK ACCOUNT. SERVICES OF CITY SOLICITOR. (5.1)

Appropriation	$500 00

EXPENDED.

For services of City Solicitor: —		
Law Department	$500 00	
Total		$500 00

MAINTENANCE. GENERAL ACCOUNT. (5.1)

Appropriation	$26,800 00

DEPARTMENT RECEIPTS. CARRIED TO GENERAL TREASURY.

For barrels	$7 50
Cabinet	10 00
Grass	566 00
Gravel	17 20
Hay	90 00
Labor	90 84
Pipe	282 01
Plants	528 79
Rates, fines, etc.	331,396 80
Supplies	3,692 97
	$336,682 11

EXPENDED.

For salaries of: —		
Superintendent, E. C. Brooks .	$2,340 00	
Assistant Supt, Chas. B. Parker .	1,500 00	
Treasurer of Water Loan Sinking Fund: —		
Wm. W. Dallinger . . .	200 00	
Inspectors: —		
F. G. Davis	1,000 00	
C. E McGuire	777 50	
Machinist, I. H. Henderson .	910 00	
Mechanic, B. P. Doe . . .	1,040 00	
Amounts carried forward . . .	$7,767 50	$26,800 00

WATER WORKS. MAINTENANCE, GENERAL ACCOUNT—Continued.

Amounts brought forward			$26,800 00
For time keeper, F. W. Cone	$936 00		
Laborers as per pay rolls	10,332 16		
		$19,035 66	
Advertising, Cambridge News		11 37	
Analysis, Stephen P. Sharples		12 00	
Brooms, Nu-Broom Co.		6 00	
Carriages, Grafton E. Kirwin		130 00	
Carriage and wagon repairs: —			
Joseph E. Bonin	$37 30		
Hugh Stewart & Co.	4 75		
Chas Waugh & Co.	375 31		
		417 36	
Carriage hire: —			
Cambridge Coach Co.	$8 00		
Whiting & Prescott	40 50		
		48 50	
Carpentry, C. S. Newcomb		221 01	
Car tickets: —			
Boston Elevated Railway Co.		165 00	
Charts, The Bristol Co.		10 00	
Damages, Mary E. Steenburg		44 00	
Dinners, M. R Jones		71 00	
Drain work, Samuel McCulloch		14 50	
Electrical work: —			
F. Bryant & Co.	$13 33		
Sundry persons	50		
		13 83	
Express wagon, Chas. Waugh & Co.		185 00	
Expressage: —			
Dodge Express Co	$10 05		
Sundry persons	5 95		
		16 00	
Fuel, Coleman Bros.		65 02	
Hardware, tools, machinery and repairs, and supplies: —			
G. W. Burditt	$8 78		
E. T. Bynner	50 46		
Chandler & Farquhar	11 59		
Chapman Valve Mfg. Co.	58 57		
Coffin Valve Co.	5 75		
J. A. Holmes & Co.	5 35		
Henry F. Jenks	22 47		
J. D. Jewett Co.	34 26		
James Maitland	111 04		
Alden Speare's Sons Co.	8 89		
Walworth Mfg. Co.	61 56		
Sundry persons	25 21		
		403 93	
Amounts carried forward		$20,870 18	$26,800 00

WATER WORKS. MAINTENANCE, GENERAL ACCOUNT — Continued.

Amounts brought forward . .		$20,870 18	$26,800 00
For harness and repairs, and horse clothing: —			
M Cavanagh	$31 10		
L. C. Chase & Co.	11 70		
Wm. H. Roberts	84 35		
		127 15	
Hay, grain, etc., J. Cushing & Co. .		655 23	
Heating apparatus: —			
A. P. Smith Manufacturing Co. .		60 00	
Horse clipping, Ferris & Co. . .		12 00	
Horseshoeing: —			
Wm. Balmer	$17 75		
J. F. Gurry & Sons	27 75		
Thomas Smith	41 00		
Street Department	120 90		
		207 40	
Hose and packing: —			
Boston Woven Hose Co. . .	$23 44		
Chas. Carr	5 75		
		29 19	
Ice: —			
Boston Ice Co.	$22 63		
Fresh Pond Ice Co.	4 69		
		27 32	
Iron work, H J. Shaw . . .		14 29	
Lanterns, Globe Gas Light Co. . .		5 00	
Lighting, etc.: —			
Cambridge Electric Light Co. .	$51 69		
Cambridge Gas Light Co. . .	11 90		
		63 59	
Lumber and cement: —			
Geo. W. Gale Lumber Co. . .	$18 36		
E. D. Sawyer & Co. . . .	10 44		
		28 80	
Meters and repairs: —			
Hersey Manufacturing Co. . .	$58 08		
National Meter Co.	9 50		
Neptune Meter Co.	16 01		
Thomson Meter Co. . . .	5 75		
Union Water Meter Co. . .	105 30		
		194 64	
Oil, Standard Oil Co.		39 78	
Painting and glazing: —			
O. C. Lougee & Co.	$110 57		
Chas. A. Sawyer	4 90		
		115 47	
Payments in accordance with Acts of 1893, Chapter 352: —			
City of Waltham	$565 94		
Town of Belmont	273 17		
Town of Lexington . . .	222 02		
Town of Lincoln	137 31		
Town of Weston	60 90		
		1,259 34	
Amounts carried forward . . .		$23,709 38	$26,800 00

WATER WORKS. MAINTENANCE, GENERAL ACCOUNT — Concluded.

Amounts brought forward . .		$23,709 38	$26,800 00
For repairing leaks: —			
Moynahan & Co.	$52 25		
Street Department	7 81		
		60 06	
Services as electrical expert: —			
Chas. H. Morse		200 00	
Stationery, printing, etc.: —			
Cambridge Chronicle Co . .	$44 75		
City Messenger Department . .	7 00		
J. A. Cummings Printing Co. .	37 36		
Thorp & Martin Co. . . .	123 81		
Sundry persons	1 50		
		214 42	
Subscriptions: —			
Engineering News Publishing Co.	$5 00		
Sundry persons	1 00		
		6 00	
Sundries		20 57	
Teaming, P. H. Dardis . . .		10 00	
Telephone rent and tolls . . .		188 69	
Testing pipes: —			
Currier Lang	$30 00		
Edward A. Stevens, Jr. . . .	30 00		
		60 00	
Transportation, Boston & Maine R. R.		16 80	
Total			24,485 92
Surplus of Appropriation			$2,314 08
Transfers from this Department: —			
To Water Works Maintenance:			
Office Expenses, Salaries		$450 00	
Pumping		1,200 00	
Fresh Pond		233 00	
Payson Park		31 00	
			1,914 00
Balance relinquished to General Treasury . . .			$400 08

MAINTENANCE. RENT. (5.1)

Appropriation	$1,200 00

EXPENDED.

For rent of offices: —		
Public Property Department, City Buildings	$1,200 00	
Total		$1,200 00

WATER WORKS — Continued.

MAINTENANCE. OFFICE EXPENSES. SALARIES. (5.1)

Appropriation			$5,000 00
EXPENDED.			
For salaries of: —			
Water Registrar, W. H. Harding	$2,525 00		
Clerks: —			
G. K. Dame	264 00		
H. L. Lincoln	1,200 00		
H. F. Milligan	780 00		
M. M. Robbins	624 00		
M. I. Harding	42 00		
		5,435 00	
Total			5,435 00
Excess of Expenditures over Appropriation			$435 00
Transfer to this Department from Maintenance, General Account			450 00
Balance relinquished to General Treasury			$15 00

MAINTENANCE. OFFICE EXPENSES. GENERAL EXPENSES. (5.1)

Appropriation			$500 00
EXPENDED.			
For car tickets: —			
Boston Elevated Railway Co.		75 00	
Stationery, printing and typewriter supplies: —			
Cambridge Chronicle Co.	$201 50		
Cotton & Gould	57 25		
Thorp & Martin Co.	71 85		
Wyckoff, Seamans & Benedict	3 50		
		334 10	
Subscriptions, Geo E. French		6 00	
Sundries		3 40	
Total			418 50
Surplus of Appropriation relinquished to General Treasury			$81 50

MAINTENANCE. PUMPING. (5.1)

Appropriation			$15,000 00
EXPENDED.			
For salaries of: —			
Engineer, E. I. Harris	$1,799 72		
Assistant Engineer, W. H. Blaisdell	1,040 00		
Laborers as per pay rolls	4,464 00		
		7,303 72	
Carpentry, C. S. Newcomb		41 45	
Amounts carried forward		$7,345 17	$15,000 00

WATER WORKS. MAINTENANCE, PLUMBING — Continued.

Amounts brought forward . .		$7,345 17	$15,000 00
For electrical supplies: —			
Pettingell, Andrews Co. . . .		9 90	
Engine and boiler supplies, and repairs: —			
Edwin Allen	$50 00		
Atlantic Works	24 50		
Barbour-Stockwell Co. . . .	49 33		
Geo. F. Blake Manufacturing Co. .	20 88		
A. W Chesterton & Co. . . .	83 32		
The Fairbanks Co.	8 25		
F. E. Fitts Mfg and Supply Co. .	7 70		
The Garlock Packing Co. . .	7 50		
Grundy Brass Works . . .	7 08		
Keystone Lubricating Co. . .	89 16		
Locke Regulator Co. . . .	6 00		
The W. W. Reid Manufacturing Co.	8 50		
Alden Speare's Sons Co. . . .	60 92		
Walworth Manufacturing Co. .	23 22		
Geo. E. Winslow	5 00		
Sundry persons	11 82		
		463 18	
Expressage: —			
Hatch & Co.	$19 78		
Sundry persons	95		
		20 73	
Fuel, Coleman Bros.		7,873 41	
Hardware, tools and repairs, and supplies: —			
E. T. Bynner	$39 23		
James Maitland	7 61		
James H. Wyeth & Co. . . .	9 30		
Sundry persons	4 79		
		60 93	
Hose, etc: —			
Boston Belting Co.	$8 52		
Boston Woven Hose Co. . .	18 86		
		27 38	
Ice, Fresh Pond Ice Co. . . .		15 30	
Oil: —			
Reynolds Oil Co.	$13 00		
Standard Oil Co.	28 02		
W. A. Wood Co.	114 68		
		155 70	
Packing, Wm. B. Merrill & Co. . .		8 00	
Paint, enamel, etc., sundry persons .		6 18	
Plating, Bay State Nickel Plate Works		11 06	
Repairing window sash: —			
O. C. Lougee & Co. . . .		15 50	
Roof repairs, John J. Blevins . .		70 16	
Amounts carried forward . . .		$16,082 60	$15,000 00

WATER WORKS. MAINTENANCE, PLUMBING — Concluded.

Amounts brought forward	$16,082 60	$15,000 00
For sundries	8 62	
Telephone rent and tolls	75 62	
Wagon repairs: —		
Roberts Iron Works Co.	33 16	
Total		16,200 00
Excess of Expenditures over Appropriation		$1,200 00
Transfer to this Department from Maintenance, General Account		1,200 00

PAYSON PARK RESERVOIR. (5.1)

Appropriation		$831 00
EXPENDED.		
For labor as per pay roll	$762 00	
Carpentry, C. S. Newcomb	66 52	
Sundries	1 80	
Total		830 32
Surplus of Appropriation relinquished to General Treasury		68

HOBBS' BROOK RESERVOIR. (5.1)

Appropriation			$1,500 00
EXPENDED.			
For salary of keeper, J. E. Bryant	$728 00		
Labor as per pay rolls	278 91		
		1,006 91	
Hardware and supplies, J. A. Higgins		15 41	
Hay, grain, etc., Geo. B. Pope & Co.		68 10	
Horseshoeing, F. G. Helm		35 60	
Insurance, T. H. Raymond		49 59	
Painting wagon, C. E. Davis		18 00	
Professional services: —			
A. Greenwood, M. D.		240 00	
Storing wagon, C. L. Keefe		5 00	
Sundries		7 95	
Telephone rent and tolls		41 95	
Use of team, Geo. W. Thompson		10 50	
Total			$1,499 01
Surplus of Appropriation relinquished to General Treasury			99

WATER WORKS — Continued.

FRESH POND RESERVOIR. (5.1)

Appropriation			$8,000 00
EXPENDED.			
For labor as per pay rolls		$6,326 25	
Bicycle repairs: —			
Boston Woven Hose Co.	$5 00		
J. L. Moseley	11 50		
		16 50	
Burlaps, James Baker		5 44	
Carpentry, C. S. Newcomb		33 11	
Cases, J. H. Corcoran & Co.		5 00	
Cash expended for sundries: —			
M. A. Carpenter		5 93	
Cracked stone and gravel: —			
Waltham Trap Rock Co.		18 23	
Drain work, Samuel McCulloch		10 00	
Drilling and blasting: —			
Waltham Trap Rock Co.		52 63	
Expressage: —			
Drayton's Express	$6 50		
Sundry persons	1 40		
		7 90	
Hardware, tools and repairs, and supplies: —			
Jos. Breck & Sons	$25 85		
E. T. Bynner	9 30		
Sundry persons	12 90		
		48 05	
Harness repairs, M. Cavanagh		5 30	
Hay and grain, J. Cushing & Co.		63 83	
Lumber, Geo. W. Gale Lumber Co.		19 21	
Painting, O. C. Lougee & Co.		14 19	
Paper, Chas. Atkins & Co.		7 76	
Printing, Cambridge Chronicle Co.		11 50	
Services of Civil Engineer: —			
French & Bryant		88 01	
Services of landscape architects: —			
Olmstead Bros.		1,307 36	
Sundries		9 29	
Teaming, sundry persons		58 75	
Use of steam roller, Street Dept.		45 00	
Wagon repairs, Jos. E. Bonin		73 55	
Total			8,232 79
Excess of Expenditures over Appropriation			232 79
Transfer to this Department from Maintenance General			233 00
Balance relinquished to General Treasury			21

WATER WORKS — Continued.

STONY BROOK RESERVOIR. (5.1)

Appropriation			$3,369 00
EXPENDED.			
For salary of gateman, Silas Baxter	$910 00		
Labor, as per pay rolls	1,102 84		
		2,012 84	
Air pump, etc-, Smith & Thayer Co.		24 00	
Barrels, The Odorless Excavating Co.		33 00	
Cleaning and repairing cess-pools: —			
James E. Burke	$11 00		
C. L. Keefe	23 25		
Geo. W. Thompson	91 88		
		126 13	
Ejectors, Hancock Inspirator Co.		6 75	
Excavating wagon: —			
Geo. W. Thompson		28 37	
Fittings: —			
Walter W. Field	$7 33		
Walworth Mfg. Co.	6 44		
		13 77	
Fuel, G. F. Frost		10 50	
Hardware and supplies, J. A. Higgins		15 29	
Horseshoeing, G. A. Hirtle		23 48	
Mason work, Jas. R. Wright		37 50	
Oats and corn, C. L. Keefe		47 25	
Painting, papering, etc.: —			
Thos. W. Scott		37 97	
Plumbing, Fred H. Kirwin		5 36	
Professional services: —			
A. Greenwood, M.D.		240 00	
Services as watchman, Jas. R. Wright		18 00	
Storage, C. L. Keefe		11 25	
Sundries		25 79	
Telephone rent and tolls		83 00	
Ticket on Boston & Maine R. R.		21 25	
Transportation, Boston & Maine R. R.		6 50	
Use of water, Waltham Water Works		14 10	
Total			2,842 10
Surplus of Appropriation relinquished to General Treasury			$526 90

SUPPLIES. (5.1)

Appropriation			$4,000 00
EXPENDED.			
For labor as per pay rolls		$1,101 30	
Expressage, Dodge Express Co.		10 15	
Amounts carried forward		$1,111 45	$4,000 00

WATER WORKS. SUPPLIES — Concluded.

Amounts brought forward . .		$1,111 45	$4,000 00
For pipe, fittings, etc.: —			
Chapman Valve Manufacturing Co.	$8 53		
Walworth Manufacturing Co. .	1,233 09		
		1,241 62	
Sundries		2 16	
Total			2,355 23
Surplus of Appropriation relinquished to General Treasury			$1,644 77

ICE FOR FOUNTAINS. (5.1)

Appropriation		$500 00
EXPENDED.		
For ice: —		
Cambridge Ice Co.	$98 62	
Fresh Pond Ice Co. . . .	209 85	
Independent Ice Co. . . .	153 00	
Total		461 47
Surplus of Appropriation relinquished to General Treasury		$38 53

WATER WORKS.

INTEREST ON WATER LOAN. (9.3)

Appropriation		$132,739 00
EXPENDED.		
For interest on the water debt . .	$129,579 00	
Total		129,579 00
Balance carried forward to new year		$3,160 00

WATER WORKS. MAINTENANCE.

RATES, FINES, ABATEMENTS. (5.1)

Appropriation		$4,000 00
EXPENDED.		
For abatements allowed on water rates	$3,985 63	
Total		3,985 63
Surplus of Appropriation relinquished to General Treasury		$14 37

WATER WORKS. MAINTENANCE.

REFUNDS. (5.1)

Appropriation		$3,000 00
EXPENDED.		
For refund on water rates	$3,000 00	
Total		3,000 00

WATER WORKS.

SINKING FUNDS. (8.2)

Appropriation		$123,000 29
EXPENDED.		
Paid to Trustees of Sinking Fund of Water Works	$123,000 29	
Total		$123,000 29

CAMBRIDGE WATER WORKS.

In account with the City of Cambridge for the year ending November 30, 1902.

RECEIPTS AND EXPENDITURES.

Balance to the credit of Construction Account, December 1st, 1901..	$13,998 20	Expended for General Construction	$16,999 14
Received from sale of bonds	18,500 00	Hobbs Brook	5,947 60
Premium on bonds	724 65	Balance carried forward to the credit of Construction Account, November 30, 1902	11,025 61
Labor and materials	749 50		
	$33,972 35		$33,972 35
Maintenance revenue:—		Maintenance expenditures:—	
General	$1,592 34	General	$24,485 92
Rates, fines, etc	331,396 80	Office, salaries	5,435 00
Supplies	3,692 97	Other expenses	418 50
		Ice for fountains	461 47
		Rent of offices	1,200 00
		Pumping	16,200 00
		Payson Park Reservoir	830 32
		Hobbs Brook Reservoir	1,499 01
		Fresh Pond Reservoir	8,232 79
		Fresh Pond, filling and grading	9,996 85
		Stony Brook Reservoir	2,842 10
		Supplies	2,355 23
		Abatements of rates, etc	3,985 63
		Refund of rates	3,000 00
		Interest on Water Debt	129,579 00
		Sinking Fund requirements	120,828 75
		Surplus revenue	2,171 54
		Balance carried forward to the credit of Interest	3,160 00
	$336,682 11		$336,682 11

SCHEDULE B–I.

Consolidated Balance Sheet. November 30, 1902.

ASSETS.	
Current Assets (B–II.)	$623,009 24
Contingent Assets (B–III.)	225,234 18
Trust Funds and Special Deposits (B–IV.)	83,234 68
Sinking Funds (B–V.)	2,202,891 07
Total Available Assets	$3,134,369 17
Fixed Assets (Unavailable. B–VI.)	10,314,204 26
Grand Total of Assets	$13,448,573 43

LIABILITIES.	
Current Liabilities (B–II.)	$27,359 15
Contingent Liabilities (B–III.)	237,343 62
Trust Liabilities (B–IV.)	83,234 68
Bonded Debt (B–V.)	8,667,500 00
Total Liabilities	$9,015,437 45
General Deficit and Surplus Account (B–VII.)	4,433,135 98
Grand total of Liabilities and Surplus	$13,448,573 43

SCHEDULE B–II.

CURRENT ASSETS.

CASH:		
Cash in the Treasury available for general purposes		*$174,969 48
Cash in the Treasury available for special assessments (*Included above.*)		
GOOD ACCOUNTS RECEIVABLE:		
Delinquent Property Taxes	$429,788 17	
Other good accounts:		
Betterments	18,251 59	
Uncollected fines, fees, etc.:	†	
Total Good Accounts Receivable		448,039 76
Total Current Assets		$623,009 24

CURRENT LIABILITIES.

(Floating Debts.)

1. OUTSTANDING ACCOUNTS DUE AND UNPAID:		
Of the current year	$ †	
Land Damages	6,898 08	
Of previous years		
Tax Sale Surplus	461 07	
2. OUTSTANDING ACCOUNTS NOT DUE:		
Temporary Tax Loans Unpaid	20,000 00	
Other Accounts	†	
Total Current Liabilities		27,359 15
Surplus of Current Assets (B-VII.)		$595,650 09

*The Treasurer's actual cash is $25,000 greater, as it includes $25,000 which has here been treated as cash in three trust funds. (See Schedule B-IV.) The actual cash balance of $199,969.48 has been shown on Schedule A-I. distributed to various funds and accounts.

† Not determined for this year.

SCHEDULE B–III.

CONTINGENT ASSETS.

DOUBTFUL ACCOUNTS RECEIVABLE:		
Delinquent Personal Property and Poll Taxes, viz.:		
1895	$4,209 17	
1896	18,894 20	
1897	26,968 17	
1898	27,467 88	
1899	22,946 76	
1900	25,388 98	
		$125,875 16
Other doubtful accounts, viz.:		
Park Betterments	$69,416 93	
Park Betterment Liens	14,117 69	
Tax Liens	15,824 40	
		99,359 02
Total Contingent Assets		$225,234 18

CONTINGENT LIABILITIES.

RETENTION FUND ACCOUNT:		
Percentage of contractors' payments retained, viz.:		
Fessenden & Libby	$19,136 41	
F. G. Coburn & Co	5,559 75	
Rockport Granite Co	2,452 29	
Holbrook, Cabot & Rollins	2,649 82	
U. S. Wood Preserving Co	2,461 05	
OTHER CONTINGENT LIABILITIES, VIZ.:		
Note — Water Works	$200,000 00	
Lynch & Woodward (in dispute)	5,084 30	
Total Contingent Liabilities		237,343 62
Deficit of Contingent Assets (B–VII.)		$12,109 44

SCHEDULE B–IV.

TRUST FUNDS ASSETS.

CASH IN TRUST FUNDS:		
Firemen's Pension Fund.....		
Police Pension Fund.....		
Special Deposits, etc., viz:		
Cemetery Fund.....	$2,834 68	
Daniel White Charity Fund.....	*5,000 00	
Dowse Institute Fund.....	*10,000 00	
Sanders Temperance Fund.....	*10,000 00	
Total Cash in Trust Funds.....		$27,834 68
INVESTMENTS OF TRUST FUNDS:		
Stocks and Bonds in Various Funds, viz.:		
Cemetery Fund.....	$55,400 00	
Total Investments in Trust Funds.....		55,400 00
Total Assets in Trust Funds.....		$83,234 68

LIABILITIES.

Firemen's Pension Fund Account.....		
Police Pension Fund Account.....		
Other Trust Funds and Special Funds, viz:		
Daniel White Charity Fund.....	$5.000 00	
Dowse Institute Fund.....	10,000 00	
Sanders Temperance Fund.....	10,000 00	
Cemetery Fund Account.....	58,234 68	
Total Liabilities.....		$83,234 68

* For the purposes of this schedule these amounts have been deducted from the Treasurer's general cash (B–II.) and set up here as assets.

In addition to the above items there is a fund from a bequest by Levi Bridge of which the Mayor, President of the Board of Aldermen and President of the Common Council are Trustees.

SCHEDULE B–v.

SINKING FUNDS ASSETS.

CASH IN ALL SINKING FUNDS.....		$149,491 07
INVESTMENTS OF SINKING FUNDS:		
Bonds and Other Securities, viz.:		
(Per list in report of Sinking Funds Commissioners).....	$2,053,400 00	
		2,053,400 00
Total of Assets in Sinking Funds.....		$2,202,891 07

BONDED DEBTS OF THE CITY.

1. GENERAL BONDS:		
a. For General Municipal Purposes.		
*Funded City Debt	$5,316,900 00	
b. For Public Industries.		
†Water Works.....	3,350,600 00	
2. SPECIAL ASSESSMENT BONDS:‡		
Total of Bonded Debts.....		8,667,500 00
Excess of Debts (Net Bonded Debt. See B–VII.)....		$6,464,608 93

* Schedule in detail will be found on pages 00 to 00 of the Auditor's Report.

† Schedule in detail will be found on page 00 of the Auditor's Report.

‡ Included in 1-a above.

SCHEDULE B–VI.

FIXED ASSETS.

LAND, BUILDINGS, AND EQUIPMENT.

Note: The figures for land and buildings in this schedule, except those for Water Works and Parks, are those given by the Assessors, November 30, 1902. The figures for land and buildings of Water Works and Parks, and for "equipment" in all departments are those given by the departments in 1900, no statement having been made since that date.

City Buildings:		
Land	$104,400 00	
Buildings	312,000 00	
Equipment	46,474 31	
		$462,874 31
Police Department:		
Land	$2,100 00	
Buildings	20,000 00	
Equipment	16,948 50	
		39,048 50
Fire Department:		
Land	$48,800 00	
Buildings	133,800 00	
Equipment	78,509 50	
		261,109 50
Fire and Police Telegraph, Equipment		42,965 00
Health Department, Equipment		1,924 00
Health Department, Hospitals:		
Land	$3,300 00	
Buildings	3,600 00	
Equipment	900 00	
		7,800 00
Sealer of Weights and Measures, Equipment		886 50
Cemeteries:		
Land	$60,000 00	
Buildings	2,500 00	
Equipment	2,000 00	
		64,500 00
Armories, Land		28,400 00
City Home:		
Land	$21,000 00	
Buildings	25,000 00	
Equipment	19,750 00	
		65,750 00
Street Department (Stables, etc.):		
Land	$57,000 00	
Buildings	43,000 00	
Equipment	55,583 21	
		155,583 21

SCHEDULE B–VI. — *Continued.*

Sewer Department (Stables, etc.:)		
Land	$5,900 00	
Buildings	4,100 00	
Equipment	2,930 00	
		$12,930 00
Street Lighting, Equipment		3,836 00
Water Works:		
Land, Dams, etc	$1,295,526 93	
Buildings	96,610 40	
Equipment	1,612,690 00	
		3,004,827 33
Schools:		
Land	$379,300 00	
Buildings	1,511,500 00	
Equipment	138,565 31	
		2,029,365 31
Library:		
Land	$85,000 00	
Buildings	115,000 00	
Equipment	66,000 00	
		266,000 00
Parks:		
Land	$3,828,904 60	
Buildings	34,000 00	
Equipment	3,500 00	
		3,866,404 60
Total Fixed Assets. (See B–VII.)		$10,314,204 26

SCHEDULE B–VII.

GENERAL DEFICIT AND SURPLUS ACCOUNT.

DEFICITS.

* Deficit of Current Assets (B–II.), if any.....		
† Deficit of Contingent Assets (B–III.), if any.....		$12,109 44
† Deficit of Trust Funds Assets (B–IV.), if any.....		
† Deficit of Sinking Funds Assets (B–V.), viz.:		
Net Bonded Debt.....		6,464,608 93
Total of all Deficits.....		$6,476,718 37

SURPLUS.

* Surplus of Current Assets (B–II.), if any.....	$595,650 09	
† Surplus of Contingent Assets (B–III.), if any.....		
† Surplus of Trust Funds (B–IV.), if any.....		
† Surplus of Sinking Funds (B–V.), if any.....		
Total Surplus, excluding Fixed Assets ‡....		595,650 09
Excess of Deficits, viz.:		
Total Net Debts of the City.....		$5,881,068 28

BALANCE.

Total of Fixed Assets:	
Land, Buildings, Equipments (B–VI.).....	$10,314,204 26
Deduct Total Net Debts of the City, as above.....	5,881,068 28
Balance of this Account, General Surplus (B-I.).....	$4,433,135 98

* Balance of Schedule B–II. will appear under *one* or the *other* of these heads.

† Balance of other schedules, B–III., etc , will appear in like manner.

‡ Fixed Assets are set up by themselves under "Balance." (See above.)

CITY FUNDED DEBT.

There have been additions to the City Funded Debt during the year as follows:—

Cambridge Bridge Loan, registered and coupon bonds payable in forty years, at an annual interest of three and one-half per cent.	
For the purpose of the construction of the "Cambridge Bridge" and its approaches, and for other purposes, as authorized under the provisions of Chapter 467 of the Legislative Acts of 1898	$100,000 00
City Loans registered bonds payable in ten years, at an annual interest of three and one-half per cent.	
For the purpose of defraying the cost of replanking and repaving Harvard Bridge and Walden Street Bridge	24,000 00
For the purpose of maintaining a Small-Pox Hospital . . .	34,000 00
Hospital Loan, registered bonds payable in twenty years, at an annual interest of three and one-half per cent	
For the purpose of defraying the cost of such real estate and land as may be purchased, taken or held, under the provisions of Chapter 99 of the Acts of 1895	6,000 00
Metropolitan Park Assessment Loan, registered bonds payable in thirty years, at an annual interest of three and one-half per cent.	
For the purpose of providing for a partial payment of the Metropolitan Park Assessments for the years 1900 and 1901 in pursuance of the provisions of Chapter 325 of the Acts of 1902 .	46,000 00
Park Loan, registered bonds payable in forty years, at an annual interest of three and one-half per cent.	
For the purpose of paying for property purchased, taken or held for a public park or esplanade as authorized by Chapter 341 of the Acts of 1892, Chapter 337 Acts of 1893, and Acts in amendment thereof and in addition thereto, and also for defraying the expense of constructing such park or esplanade and for any purpose incident to the protection, enlargement or advancement of a public park or esplanade in said City of Cambridge, as authorized by Chapter 221 of the Acts of the year 1899 . .	48,000 00
Schoolhouse Loans, registered bonds payable in twenty years, at an annual interest of three and one-half per cent	
For the purpose of the construction of a schoolhouse on Willow Street, and for defraying the cost of the land purchased therefor	86,500 00
For the purpose of the construction of a schoolhouse on Elm Street and for defraying the cost of the land purchased therefor, as authorized by the provisions of Chapter 212 of the Acts of 1894	11,000 00
Sewer Loan, registered bonds payable in thirty years, at an annual interest of three and one-half per cent.	
For the purpose of constructing sewers, as authorized by Chapters 189 and 473 of the Acts of 1899	20,000 00
Street Loan, registered bonds payable in twenty years, at an annual interest of three and one-half per cent.	
For the purpose of the construction of highways, streets and ways and for defraying the cost on any real estate or interest therein taken for such highways, streets, way or buildings, under authority conferred by Chapter 212 of the Acts of 1894 . .	44,000 00
Amount carried forward	$419,500 00

Amount brought forward		$419,500 00

There has been a decrease in the City Debt by the payment of matured bonds as follows :—

Building Loan, coupon bonds issued May 2, 1892, at an annual interest of four per cent.	$20,000 00	
Paving Loan, coupon bonds issued Nov. 1, 1892, at an annual interest of four per cent.	50,000 00	
Schoolhouse Loan, coupon bonds issued Nov. 1, 1892, at an annual interest of four per cent . . .	20,000 00	
Street Loan, coupon bonds issued May 2, 1892, at an annual interest of four per cent.	55,000 00	
		145,000 00
Total increase		$274,500 00

	1901.	1902.	Increase.
Funded City Debt.....	$5,042,400 00	$5,316,900 00	$274,500 00
Sinking Funds....	1,041,852 36	1,095,255 09	53,402 73
Net Funded City Debt.....	$4,000,547 64	$4,221,644 91	$221,097 27

The following is a statement of the total funded debt of the City, with the rates of interest thereon :—

BRIDGE LOAN.

Date of Issue.	Rate of Interest.	When Due.	Amount.	Total.
Oct. 1, 1887...	4 per cent.—30 yrs....	Oct. 1, 1917.....	$10,000 00	
July 1, 1888.....	4 " —30 "	July 1, 1918.....	100,000 00	
Sept. 1, 1888.....	4 " —30 "	Sept. 1, 1918.....	100,000 00	
Mar. 1, 1889.... ...	4 " —30 "	Mar. 1, 1919.....	115,000 00	
Nov 1, 1890.....	4 " —30 "	Nov. 1, 1920.....	5,000 00	
July 1, 1891.....	4 " —30 "	July 1, 1921.....	60,000 00	
Aug. 1, 1893.....	4 " —30 "	Aug. 1, 1923.....	10,000 00	
July 1, 1899.....	3½ " —40 "	July 1, 1939.....	50,000 00	
July 2, 1900.....	3½ " —40 "	July 2, 1940.....	100,000 00	
Feb. 1, 1901.....	3 " —40 " ...	Feb. 1, 1941.	100,000 00	
Nov. 1, 1901.....	3½ " —40 "	Nov. 1, 1941.....	100,000 00	
July 1, 1902.....	3½ " —40 "	July 1, 1942.....	100,000 00	$850,000 00

BUILDING LOAN.

Nov. 1, 1893.....	4 per cent.—10 yrs....	Nov. 1, 1903.....	$40,000 00	
Aug. 1, 1894	4 " —20 " ...	Aug. 1, 1914.....	118,000 00	
Oct. 1, 1895.....	4 " —20 "	Oct. 1, 1915.....	60,000 00	
Oct. 1, 1896.....	4 " —20 "	Oct. 1, 1916.....	103,000 00	$321,000 00

CAMBRIDGE CEMETERY LOAN.

Aug. 1, 1885.....	4 per cent.—20 yrs....	Aug. 1, 1905.....	$65,000 00	
Nov. 1, 1900.....	3½ " —10 "	Nov. 1, 1910.....	7,000 00	$72,000 00
Amount carried forward				$1,243,000 00

Amount brought forward $1,243,000 00

CITY LOAN.

Aug. 1, 1894	4 per cent.—10 yrs.	Aug. 1, 1904	$52,000 00	
Aug. 1, 1898	3½ " —10 "	Aug. 1, 1908	4,900 00	
July 1, 1899	3½ " —10 "	July 1, 1909	45,000 00	
Nov. 1, 1899	3½ " —10 "	Nov. 1, 1909	32,000 00	
Nov. 1, 1900	3½ " —10 "	Nov. 1, 1910	36,000 00	
Nov. 1, 1901	3½ " —10 "	Nov. 1, 1911	36,000 00	
July 1, 1902	3½ " —10 "	July 1, 1912	38,000 00	
Nov. 1, 1902	3½ " —10 "	Nov. 1, 1912	20,000 00	$263,900 00

CLAY LAND LOAN.

July 1, 1896	4 per cent.—15 yrs.	July 1, 1911	$50,000 00	
Nov. 1, 1897	3½ " —15 "	Nov. 1, 1912	20,000 00	
Aug. 1, 1898	3½ " —15 "	Aug. 1, 1913	10,000 00	
July 1, 1899	3½ " —15 "	July 1, 1914	17,000 00	$97,000 00

HOSPITAL LOAN.

July 1, 1902	3½ per cent.—20 yrs.	July 1, 1922		$6,000 00

METROPOLITAN PARK ASSESSMENT LOAN.

Aug. 1, 1902	3½ per cent.—30 yrs.	Aug. 1, 1932		$46,000 00

PARK LOAN.

Feb. 1, 1894	4 per cent.—30 yrs.	Feb. 1, 1924	$360,000 00	
Aug. 1, 1895	4 " —40 "	Aug. 1, 1935	100,000 00	
Feb. 1, 1896	4 " —40 "	Feb. 1, 1936	100,000 00	
Aug. 1, 1896	4 " —30 "	Aug. 1, 1926	100,000 00	
Oct. 1, 1896	4 " —30 "	Oct 1, 1926	40,000 00	
Sept. 1, 1897	3½ " —40 "	Sept. 1, 1937	100,000 00	
Nov. 1, 1897	3½ " —40 "	Nov. 1, 1937	50,000 00	
June 1, 1898	3½ " —40 "	June 1, 1938	50,000 00	
Aug. 1, 1898	3½ " —40 "	Aug 1, 1938	100,000 00	
Aug. 1, 1899	3½ " —40 "	Aug. 1, 1939	100,000 00	
July 2, 1900	3½ " —40 "	July 2, 1940	50,000 00	
Nov. 1, 1900	3½ " —40 "	Nov. 1, 1940	50,000 00	
Nov. 1, 1901	3½ " —40 "	Nov. 1, 1941	100,000 00	
July 1, 1902	3½ " —40 "	July 1, 1942	48,000 00	$1,348,000 00

PAVING LOAN.

Oct. 1, 1897	3½ per cent.—10 yrs	Oct. 1, 1907		$20,000 00

PUBLIC LIBRARY LOAN.

Nov. 1, 1901	3½ per cent.—20 yrs.	Nov. 1, 1921		$27,000 00

Amount carried forward $3,050,900 00

Amount brought forward $3,050,900 00

SCHOOLHOUSE LOAN.

Oct. 1, 1896	4	per cent.—20 yrs	Oct. 1, 1916	$6,000 00	
July 1, 1897	3½	" —20 "	July 1, 1917	100.000 00	
Nov. 1, 1897	3½	" —10 "	Nov. 1, 1907	9,500 00	
May 2, 1898	3½	" —20 "	May 2, 1918	100,000 00	
June 1, 1898	3½	" —20 "	June 1, 1918	50,000 00	
Aug. 1, 1898	3½	" —20 "	Aug. 1, 1918	142,000 00	
July 1, 1899	3½	" —20 "	July 1, 1919	42,000 00	
Nov. 1, 1899	3½	" —20 "	Nov 1, 1919	13,000 00	
July 1, 1901	3½	" —20 "	July 1, 1921	76,000 00	
July 1, 1902	3½	" —20 "	July 1, 1922	86,500 00	
Oct. 1, 1902	3½	" —20 "	Oct. 1, 1922	11,000 00	$636,000 00

SEWER LOAN.

July 1, 1873	6	per cent.—30 yrs	July 1, 1903	$136,000 00	
July 1, 1874	6	" —30 "	July 1, 1904	295,000 00	
July 1, 1875	6	" —30 "	July 1, 1905	144,000 00	
Nov. 1, 1887	4	" —20 "	Nov. 1, 1907	30,000 00	
Nov. 1, 1889	4	" —20 "	Nov. 1, 1909	22,000 00	
May 1, 1890	4	" —20 "	May 1, 1910	15,000 00	
July 1, 1891	4	" —20 "	July 1, 1911	15,000 00	
Aug. 1, 1894	4	" —30 "	Aug. 1, 1924	75,000 00	
Oct. 1, 1895	4	" —30 "	Oct. 1, 1925	60,000 00	
Oct. 1, 1896	4	" —20 "	Oct. 1, 1916	75,000 00	
Nov. 1, 1899	3½	" —30 "	Nov. 1, 1929	42,000 00	
July 2, 1900	3½	" —30 "	July 2, 1930	100,000 00	
Aug. 1, 1901	3½	" —30 "	Aug. 1, 1931	110,000 00	
Nov. 1, 1902	3½	" —30 "	Nov. 1, 1932	20,000 00	$1,139,000 00

STREET LOAN.

Aug. 1, 1894	4	per cent.—20 yrs	Aug. 1, 1914	$30,000 00	
Oct. 1, 1895	4	" —20 "	Oct. 1, 1915	60,000 00	
Oct. 1, 1896	4	" —20 "	Oct. 1, 1916	137,000 00	
Nov. 1, 1897	3½	" —10 "	Nov. 1, 1907	11,000 00	
May 2, 1898	3½	" —20 "	May 2, 1918	15,000 00	
Nov. 1, 1899	3½	" —20 "	Nov. 1, 1919	5,000 00	
Nov. 1, 1900	3½	" —20 "	Nov. 1, 1920	21,000 00	
July 1, 1901	3½	" —20 "	July 1, 1921	54,000 00	
July 1, 1902	3½	" —20 "	July 1, 1922	30,000 00	
Nov. 1, 1902	3½	" —20 "	Nov. 1, 1922	14,000 00	$377,000 00

STREET WIDENING LOAN.

July 1, 1873	6	per cent.—30 yrs	July 1, 1903	$10,000 00	
July 1, 1874	6	" —30 "	July 1, 1904	90,000 00	
July 1, 1875	6	" —30 "	July 1, 1905	14,000 00	$114,000 00

TOTAL FUNDED CITY DEBT $5,316,900 00

THE FUNDED WATER DEBT.

There has been an addition to the Water Debt during the year, by the issue of registered 3½ per cent. bonds as follows :—

July 1, 1902, due July 1, 1922	$13,500 00
November 1, 1902, due November 1, 1922	5,000 00
	$18,500 00

	1901.	1902.	Decrease.	Increase.
Funded Water Debt	$3,332,100 00	$3,350,600 00		$18,500 00
Sinking Fund	957,731 54	1,107,635 98		149,904 44
Net Funded Water Debt	$2,374,368 46	$2,242,964 02	$131,404 44	

Following is a statement of the total Funded Water Debt of the City, with rates of interest thereon: —

Date of Issue.	Rate of Interest.	When Due.	Amount.	Total.
Nov. 1, 1886	3½ per cent.—20 years	Nov. 1, 1906	$43,000 00	
Oct. 1, 1887	4 " —20 "	Oct. 1, 1907	90,000 00	
Nov. 1, 1887	4 " —20 "	Nov. 1, 1907	22,000 00	
July 1, 1888	4 " —20 "	July 1, 1908	46,000 00	
Aug. 1, 1888	4 " —20 "	Aug. 1, 1908	25,000 00	
July 1, 1889	4 " —20 "	July 1, 1909	20,000 00	
May 1, 1885	4 " —25 "	May 1, 1910	288,000 00	
July 1, 1890	4 " —20 "	July 1, 1910	75,000 00	
Sept. 1, 1890	4 " —20 "	Sept. 1, 1910	125,000 00	
Jan. 1, 1891	4 " —20 "	Jan. 1, 1911	20,000 00	
Oct. 1, 1891	4 " —20 "	Oct. 1, 1911	35,000 00	
Jan. 1, 1892	4 " —20 "	Jan. 1, 1912	150,000 00	
May 2, 1892	4 " —20 "	May 2, 1912	75,000 00	
Nov. 1, 1892	4 " —20 "	Nov. 1, 1912	45,000 00	
Feb. 1, 1893	4 " —20 "	Feb. 1, 1913	100,000 00	
Aug. 1, 1893	4 " —20 "	Aug. 1, 1913	50,000 00	
April 1, 1895	4 " —20 "	April 1, 1915	200,000 00	
Aug. 1, 1895	4 " —20 "	Aug. 1, 1915	200,000 00	
April 1, 1894	4 " —30 "	April 1, 1924	300,000 00	
April 1, 1896	4 " —20 "	April 1, 1916	100,000 00	
July 1, 1896	4 " —20 "	July 1, 1916	200,000 00	
Aug. 1, 1896	4 " —20 "	Aug. 1, 1916	100,000 00	
Oct. 1, 1896	4 " —20 "	Oct. 1, 1916	265,100 00	
April 1, 1897	3½ " —20 "	April 1, 1917	200,000 00	
July 1, 1897	3½ " —20 "	July 1, 1917	100,000 00	
Nov. 1, 1897	3½ " —20 "	Nov. 1, 1917	75,000 00	
Dec. 1, 1897	3½ " —20 "	Dec. 1, 1917	140,000 00	
May 2, 1898	3½ " —20 "	May 2, 1918	50,000 00	
June 1, 1898	3½ " —20 "	June 1, 1918	60,000 00	
Nov. 1, 1898	3½ " —20 "	Nov. 1, 1918	50,000 00	
Nov. 1, 1899	3½ " —20 "	Nov. 1, 1919	23,000 00	
Nov. 1, 1900	3½ " —20 "	Nov. 1, 1920	30,000 00	
July 1, 1901	3½ " —20 "	July 1, 1921	30,000 00	
July 1, 1902	3½ " —20 "	July 1, 1922	13,500 00	
Nov. 1, 1902	3½ " —20 "	Nov. 1, 1922	5,000 00	$3,350,600 00

RECAPITULATION

Amount of funded City Loan upon which interest is at 6 per cent.	$689,000 00	
Amount of funded City Loan upon which interest is at 4 per cent.	2,113,000 00	
Amount of funded City Loan upon which interest is at 3½ per cent.	2,414,900 00	
Amount of funded City Loan upon which interest is at 3 per cent.	100,000 00	
		$5,316,900 00
Amount of Water Loan upon which interest is at 4 per cent.	$2,531,100 00	
Amount of Water Loan upon which interest is at 3½ per cent.	819,500 00	
		3,350,600 00

Temporary loans for the past twelve years, and interest upon the same: —

Year.	Temporary Loan.	Interest paid upon Loan.	Year.	Temporary Loan.	Interest paid upon Loan.
1891	$465,000	$10,796 25	1897	$600,000	$6,186 40
1892	516,000	8,015 51	1898	500,000	9,642 86
1893	541,850	11,560 32	1899	550,000	6,968 86
1894	125,000	3,106 15	1900	600,000	9,961 96
1895	550,000	6,194 64	1901	550,000	6,759 03
1896	786,000	12,344 07	1902	520,000	8,337 76

THE TRUST FUNDS.

Assumed by the City are held by trustees, and interest is paid upon them at the rate of 6 per cent. annually, as follows: —

Name of Fund.	Amount.	Interest.	
Daniel White Charity Fund	$5,000	At 6 per cent	$300
Dowse Institute Fund	10,000	At 6 per cent	600
Sanders Temperance Fund	10,000	At 6 per cent	600
	$25,000		$1,500

CEMETERY FUND.

Amount of Fund Nov. 30, 1901		$54,543 18
RECEIVED.		
For perpetual care of lots in Cambridge Cemetery	$3,661 50	
Deed Trust Lot	30 00	
Interest on investments	1,975 02	
	$5,666 52	
EXPENDED.		
For care of lots in Cambridge Cemetery	1,975 02	
		3,691 50
Amount of Fund Nov. 30, 1902		$58,234 68
Of which amount $132.00 is a Fund for Deeds in Trust.		
The Cemetery Fund is held in trust and is invested as follows: —		
City of Cambridge Bonds	$55,400 00	
Cambridgeport Savings Bank	2,834 68	
		$58,234 68

SINKING FUND "CAMBRIDGE BRIDGE."

Amount of Fund Nov. 30, 1901	$2,645 89
Interest accumulations (1902)	79 96
Appropriation for 1902	4,666 67
Amount of Fund Nov. 30, 1902	$7,392 52

SINKING FUND "HARVARD BRIDGE."

Amount of Fund Nov. 30, 1901	$125,407 70
Interest accumulations (1902)	3,790 44
Appropriation for 1902	9,500 00
Amount of Fund Nov. 30, 1902	$138,698 14

SINKING FUND "PARK."

Amount of Fund, Nov. 30, 1901	$105,548 22
Interest accumulations (1902)	3,190 19
Appropriation for 1902	22,541 67
Amount of Fund Nov. 30, 1902	$131,280 08

SINKING FUND "CLAY LAND."

Amount of Fund Nov. 30, 1901	$21,320 12
Interest accumulations (1902)	644 40
Appropriation for 1902	5,335 00
Amount of Fund Nov. 30, 1902	$27,299 52

SINKING FUND "IMPROVED SEWERAGE."

Amount of Fund Nov. 30, 1901	$4,237 89
Interest accumulations (1902)	128 08
Appropriation for 1902	5,747 50
Amount of Fund	$10,113 47

SINKING FUND "GENERAL."

Amount of Fund Nov. 30, 1901	$782,692 54
Interest accumulations (1902)	31,727 83
Appropriation for 1902	111,050 99
	$925,471 36

EXPENDED.

For Commissioners of Sinking Funds	145,000 00
Amount of Fund Nov. 30, 1902	$780,471 36

COMMISSIONERS OF SINKING FUNDS.

Amount of Funds Nov. 30, 1901		$1,041,852 36

RECEIVED.

From City Treasurer, appropriation for 1902: —		
Cambridge Bridge	$4,666 67	
Clay Lands	5,335 00	
General	111,050 99	
Harvard Bridge	9,500 00	
Improved Sewerage	5,747 50	
Parks	22,541 67	
		$158,841 83
Interest accumulations		39,560 90
Amount carried forward		$1,240,255 09

Amount brought forward		$1,240,255 09

EXPENDED.

For matured bonds as follows: —		
Building Loan, due May 2, 1902	$20,000 00	
Paving Loan, due Nov. 1, 1902	50,000 00	
Schoolhouse Loan, due Nov. 1, 1902	20,000 00	
Street Loan, due May 2, 1902	55,000 00	
		145,000 00
Amount of Fund Nov. 30, 1902		$1,095,255 09

TRUSTEES OF SINKING FUND OF WATER WORKS.

Amount of Fund Nov. 30, 1901		$957,731 54

RECEIVED.

From City Treasurer for amount due and appropriated by the City Council together with the surplus revenue of the Water Works	$123,000 29	
Interest accumulations	26,904 15	
		149,904 44
Amount of Fund Nov. 30, 1902	$1,107,635 98	

TAXES.

The amount of taxes assessed by the Board of Assessors on the real and personal estates and polls of Cambridge, for the year 1902, was as follows: —

Valuation of real estate	$80,396,900.00
Valuation of personal estate	17,742,985.00
	$98,139,885.00
Assessed at $18.30 per $1,000 gives	$1,795,959.8955
25,680 polls at $2	51,360 0000
Bank stock (non-residents separately assessed)	7,237.9245
	$1,854,557.8200

The tax is divided as follows: —

For City purposes *	$1,521,672.58
County assessments	100,184.86
Overlay	58,549.6855
State assessments	166,912.77
State charge for non-resident bank stock	7,237 9245
	$1,854,557.8200

Increase in number of polls since last year: —

374 polls at $2	$748.00
Increase in real estate valuation	1,828,600 00
Increase in personal valuation	94,410.00
Gain in valuation since last year	$1,923,758.00

*To meet the City expenses the income from various departments is added to this sum raised by taxation.

Number of houses in 1902	13,889.67
Number of houses in 1901	13,846.50
Number of houses built during the past year	43.17
Number of horses assessed	4,549
Number of cows assessed	177
Number of swine assessed	58

POLLS AND VALUATION OF POLLS AND ESTATES, MAY 1, 1900.

Wards.	Polls.	Valuation of Polls.	Personal.	Real Estate.	Total Real and Personal	Dwellings.	Total Tax.
One.	4,229	$8,458 00	$7,746,700	$21,681,700	$29,428,400	2,792	$505,797.96
Two	7,690	15,380 00	3,767,685	16,986,500	20,754,185	3,716	366,125.7265
Three	3,717	7,434 00	2,053,245	10,002,900	12,056,145	1,608	211,182.8505
Four	5,717	11,434 00	2,502,000	15,736,400	18,238,400	3,342	319,662.96
Five	3,764	7,528 00	1,795,600	12,193,200	13,988,800	2,255	243 938.72
Totals.	25,117	$50,234 00	$17,865,230	$76,600,700	$94,465,930	13,713	$1,646,708.2170

POLLS AND VALUATION OF POLLS AND ESTATES, MAY 1, 1901.

Wards.	Polls.	Valuation of Polls.	Personal.	Real Estate.	Total Real and Personal	Dwellings.	Total Tax.
One.	4,234	$8,468 00	$7,536,300	$22,540,800	$30,077,100	2,722	$516,770.99
Two	7,807	15,614 00	3,802,460	17,179,400	20,981,860	3,698 2-3	370,207.434
Three	3,697	7,394 00	2,154,615	10,113,700	12,268 315	1,615	214,728.5235
Four	5,795	11,590 00	2,487,100	16,341,900	18,829,000	3,345	329,800.10
Five	3,773	7,546 00	1,668,100	12,392,500	14,060,600	2,465 5-6	245,170.14
Totals	25,306	$50,612 00	$17,648,575	$78,568,300	$96,216,875	13,846 1-2	$1,676,677.1875

POLLS AND VALUATION OF POLLS AND ESTATES, MAY 1, 1902.

Wards.	Polls.	Valuation of Polls.	Personal.	Real Estate.	Total Real and Personal	Dwellings.	Total Tax.
One	2,002	$4,004 00	$1,661,120	$7,584,600	$9,245,720	817	$173,200.676
Two	1,839	3,678 00	358,800	2,912,100	3,270,900	787	63,535.47
Three	2,858	5,716 00	259,000	3,578,700	3,837,700	1,200	75,945.91
Four	2,927	5,854 00	1,625,085	6,866,400	8,491,485	1,399	161,248.1755
Five	2,217	4,434 00	1,929,080	7,063,900	8,992,980	1,163 1-6	169,005.534
Six	3,302	6,604 00	1,267,100	9,894,500	11,161,600	1,597	210,861.28
Seven	2,741	5,482 00	1,4 9,700	6,751,000	8,180,700	1,754 1-2	155,188.81
Eight	2,132	4,264 00	2,868,600	10,612,400	13,481,000	1,301	250,966.30
Nine	1,850	3,700 00	4,615,000	12,632,700	17,247,700	1,384	319,332.91
Ten	1,550	3,100 00	1,324,200	6,960,400	8,284.6 0	1,131	154,708.18
Eleven	2,262	4,524 00	405,300	5,540,200	5,945,500	1,356	113,326.65
Totals	25,680	$51,360 00	$17,742,985	$80,396,900	$98,139,885	13,889 2-3	$1,847,319.8955

Statement of the valuations of the personal property and real estate of the City of Cambridge, with the number of polls, dwellings, and rate of taxation for the past thirteen years: —

Year.	Polls.	Personal.	Real Estate.	Total.	Dwellings.	Rate per $1,000.
1890	19,221¾	$15,339,925	$52,235,000	$67,574,925	10,615	$15 60
1891	20,731¼	16,508,770	54,167,914	70,676,684	10,932	15 50
1892	22,013¼	17,687,595	56,668,100	74,355,695	11,359	15 00
1893	22,752	17,511,089	58,782,900	76,293,989	11,768	16 40
1894	22,172	16,658,320	60,877,300	77,535,620	12,262	15 80
1895	22,781	16,607,760	64,303,700	80,911,060	12,305	15 70
1896	23,847	15,914,995	67,835,100	83,750,095	12,723	15 10
1897	24,407	16,302,545	70,339,200	86,641,745	13,217	17 50
1898	24,628	16,642,990	72,908,100	89,551,090	13,473	16 40
1899	24,995	16,991,995	74,550,800	91,542,795	13,588	17 10
1900	25,117	17,865,230	76,600,700	94,465,930	13,713	16 90
1901	25,306	17,648,575	78,568,300	96,216,875	13,846½	16 90
1902	25,680	17,742,985	80,396,900	98,139,885	13,889⅔	18 30

Abatements and discounts upon taxes for the past thirteen years, and amount of tax uncollected December 1, 1902 :—

Year.	Total Tax.	Total Abatement.	Total Discounts.	Amount of Tax uncollected December 1, 1902
1890	$1,099,741 38	$20,966 82	$28,012 44	.....
1891	1,143,712 67	21,343 12	.....	.....
1892	1,240,186 50	21,636 54	.....	.....
1893	1,303,639 84	24,678 10	.....	.....
1894	1,278,899 72	26,926 07	.....	.....
1895	1,324,613 76	19,427 40	.....	$4,209 17
1896	1,321,932 65	17,922 54	.....	18,894 20
1897	1,574,047 50	22,081 73	.....	26,968 17
1898	1,527,863 88	27,566 98	.....	27,467 88
1899	1,623,592 35	35,317 61	.....	22,946 76
1900	1,654,588 36	33,005 90	.....	25,388 98
1901	1,683,690 84	24,390 38	.....	28,645 07
1902	1,854,557 82	30,013 44	.....	401,143 10

ABATEMENTS — TAXES.

	Real.	Personal.	Polls.	Total.
Taxes of 1896	.....	$12 08	.....	$12 08
" " 1897	.....	10 50	.....	10 50
" " 1898	.....	1 69	$2 00	3 69
" " 1899	.....	267 44	2 00	269 44
" " 1900	$184 21	944 92	8 00	1,137 13
" " 1901	5,978 44	6,334 03	92 00	12,404 47
" " 1902	7,234 81	8,857 32	84 00	16,176 13
	$13,397 46	$16,427 98	$188 00	$30,013 44

The valuation of estates in this City, for the years hereinbefore mentioned, are the same as originally made by the Board of Assessors, during those years, and the same figures were reported by that Board to the Tax Commissioners for each of the years respectively. These valuations were subject to changes in each year, after such report was made, as shown by the following: —

Net valuations of estates in the City of Cambridge, for the past three years, after adding the amounts of all supplementary warrants and deducting therefrom all abatements: —

Year.	Total Valuation.	Abatements.	Net Valuation.
1900	$94,690,830	$1,863,409	$92,827,421
1901	96,300,635	1,469,483	94,831,152
1902	98,152,685	879,351	97,273,334
	$289,144,150	$4,212,243	$284,931,907

BORROWING CAPACITY.

The average net valuation of the City of Cambridge for the years 1900, 1901 and 1902 . . . . $94,977,302 00

This last sum represents the amount upon which the limit of the rate of taxation, and also of municipal indebtedness is fixed under the provisions of Chapter 312 of the Acts of the year 1885.

2½ per cent. on same is		$2,374,432 55
The entire City Debt is	$5,316,900 00	
Of this amount the following loans are not within the legal debt limit, being exempted by the following Acts of the Legislature: —		
Cambridge Bridge Loan.		
Acts of 1898, Chapter 467 . . . $450,000 00		
Clay Land Loan.		
Acts of 1896, Chapter 175 . . . 97,000 00		
Harvard Bridge Loan.		
Acts of 1887, Chapter 282 Acts of 1888, Chapter 73 Acts of 1891, Chapter 311 . . 400,000 00		
Park Loan.		
Acts of 1892, Chapter 341 Acts of 1893, Chapter 337 Acts of 1894, Chapter 89 Acts of 1897, Chapter 469 Acts of 1899, Chapter 221 . . 1,348,000 00		
Sewer Loan.		
Acts of 1899, Chapter 189 Acts of 1899, Chapter 473 . . 262,000 00		
	$2,557,000 00	
Amounts carried forward	$2,759,900 00	$2,374,432 55

Amounts brought forward		$2,759,900 00	$2,374,432 55
The entire Sinking Fund is . . .	$1,095,255 09		
Of this amount there should be deducted on account of Exempted Loans as follows: —			
Cambridge Bridge . .	$7,392 52		
Harvard Bridge . . .	138,698 14		
Parks	131,280 08		
Clay Lands . . .	27,299 52		
Improved Sewerage . .	10,113 47		
	314,783 73		
Net Sinking Fund . .		780,471 36	
Net City Debt December 1, 1902			1,979,428 64
Borrowing capacity for City purposes December 1, 1902 . . .			$395,003 91

ACTS OF 1885, CHAPTER 312.

"AN ACT TO LIMIT MUNICIPAL DEBT OF AND THE RATE OF TAXATION IN CITIES.

"Be it enacted, etc., as follows: —

"SECTION 1. The taxes assessed on property in any city, except the City of Boston, exclusive of State Tax, County Tax and sums required by law to be raised on account of the City Debt, shall not exceed in any year twelve dollars on every one thousand dollars of the average of the assessors' valuations of the taxable property therein for the preceding three years, the valuation being first reduced by the amount of all abatements allowed thereon, previous to the thirty-first day of December in the year preceding said assessment, and any order or appppropriation requiring a larger assessment than is herein limited shall be void.

"SECT. 2. The limit of indebtedness of cities shall hereafter be two and one-half per cent. on the average valuation prescribed in Section one of this act."

TAX LEVY.

Average net valuation for 1900, 1901 and 1902	$94,977,302 00
Assessed at $12 per $1,000 gives	1,139,727 62

Which is the legal limit of taxation for municipal purposes for 1903, outslde of the Sinking Fund requirements, Interest on the Debt and State and County Tax, unless advantage is taken of the following Legislative Act of 1893: —

ACTS OF 1893, CHAPTER 247.

"AN ACT AUTHORIZING ASSESSORS IN CITIES OF LESS THAN ONE HUNDRED THOUSAND INHABITANTS TO USE THE VALUATION OF THE YEAR PRECEDING AS A BASIS OF TAXATION.

"Be it enacted, etc., as follows:—

"SECTION 1. In every city containing less than one hundred thousand inhabitants, the taxes assessed on property, exclusive of State Tax, County Tax and sums required by law to be raised on account of City Debt, shall not exceed in any year twelve dollars on every one thousand dollars of the assessors' valuation of the taxable property therein for the preceding year, said valuation being first reduced by the amount of all abatements allowed thereon previous to the thirty-first day of December in the year preceding said assessment, and any order or appropriation requiring a larger assessment than is herein limited shall be void; but the City Council of any city coming within the provisions of this Act may, in any year, decide that the taxes assessed shall be raised in accordance with the provisions of Section one of Chapter three hundred and twelve, of the Acts of the year eighteen hundred and eighty-five."

In which case the net valuation for 1902 being	$97,273,334 00
Assessed at $12 per $1,000 gives	1,167,280 00

ESTIMATED REVENUE AND ACTUAL REVENUE FOR THE YEAR ENDING NOVEMBER 30, 1902.

	Actual.	Estimated.
Bridge Department	$3,533 76	$3,531 26
Cemetery Department	19,944 68	18,800 00
City Clerk Department	2,784 68	2,800 00
City Messenger Department	1,071 21	1,200 00
Contingent Fund	296 00	.....
Election Expenses	884 00	884 00
Electrical Department	168 01	200 00
Fire Department	136 00	100 00
Health Department	4,976 43	.....
Inspection of Milk and Vinegar	145 50	200 00
Interest	12,260 30	10,500 00
Law Department	525 00	500 00
Overseers of the Poor	19,418 68	19,300 00
Park Department	2,004 15	2,400 00
Plumbers' Examiners	33 00	50 00
Police Department	4,757 16	6,000 00
Public Library	5,208 60	5,200 00
Public Property	5,130 15	4,558 10
School Department	8,547 31	7,600 00
Sealer of Weights and Measures	932 03	900 00
Sewer Department	5,781 64	9,250 00
State Aid	15,289 12	15,500 00
Street Department	30,604 21	31,822 38
Treasury Department	2,931 33	3,300 00
Water Works	338,156 26	327,236 75
Betterments	1,111 15	.....
Park Betterments	2,905 62	.....
Tax Liens	7,005 00	.....
Tax Corporation	82,070 84	82,000 00
Tax National Bank	9,528 74	10,000 00
Tax Street Railway	69,280 98	.....
Taxes 1902	1,454,478 96	1,545,622 06
Old Taxes	321,166 74	310,000 00
	$2,433,061 24	$2,419,454 55

The following appropriations were to be provided for by the issue of bonds as follows:—

	Appropriations.	Bonds Issued for.
Bridges:—Cambridge	$100,000 00	$100,000 00
Harvard	23,000 00	23,000 00
Walden Street	1,000 00	1,000 00
Improved Sewerage	20,000 00	20,000 00
Land for Hospital	6,500 00	6,000 00
Metropolitan Park Assessments	60,000 00	46,000 00
New Schoolhouses and Land:—Elm Street	11,000 00	11,000 00
Willow Street	89,500 00	86,500 00
Park Construction	50,000 00	48,000 00
Small-Pox Hospital	37,600 00	34,000 00
Street Construction	45,000 00	44,000 00
Water Works Construction	19,000 00	18,500 00
Premiums received on these bonds	.....	17,445 90
	$462,600 00	$455,445 90

The difference in the amount received from sale of bonds and the amount appropriated was made up from unestimated revenue received from various sources.

TRANSFERS.

The following transfers were made from the appropriations mentioned, to make up deficiencies occurring in the appropriations to which transfers were made, viz :—

From the Appropriation for	Amounts.	To the Appropriation for	Amounts.
Assessors' Department, Salaries...	$60 00	Assessors' Dept., General Expenses	$60 00
Bridge Dept , General Expenses...	350 00	Bridge Department, Salaries.....	350 00
Cemetery Department, Salaries....	300 00	Cemetery Dept., General Expenses	300 00
City Clerk Dept., General Expenses	150 00	City Clerk Department, Salaries ...	150 00
Contingent Fund.....	14,210 00	Assessors' Department, Salaries...	750 00
		Auditing Department, Salaries.....	100 00
		Cemetery Department:—	
		General Expenses.....	200 00
		Salaries	400 00
		Election Expenses:—	
		City Clerk.....	525 00
		Registrar of Voters.....	400 00
		Superintendent of Buildings.....	1,100 00
		Electrical Dept., Street Lighting...	310 00
		Health Department:—	
		Small Pox Hospital.	500 00
		Law Department, Salaries.....	50 00
		Overseers of the Poor:—	
		Farm Labor.....	290 00
		House Offal, Labor.....	680 00
		House Offal, General Expenses...	655 00
		Park Department:—	
		Brown Tail Moth.....	1,800 00
		Cambridge Field.....	650 00
		Police Department:—	
		General Expenses.....	950 00
		Salaries	1,350 00
		Public Property:—	
		City Buildings, General Expenses	250 00
		Salaries.....	100 00
		School Department:—	
		Care of Truants.....	50 00
		Incidental Expenses.	275 00
		Text Books and Supplies.....	2,350 00
		Transportation of Pupils.	200 00
		Sealer of Weights and Measures:—	
		General Expenses.....	275 00
City Messenger Dept., Salaries.....	650 00	Contingent Fund.....	650 00
Electrical Department:—		Electrical Department:—	
Wires, General Expenses.....	80 00	Wires, Salaries.....	80 00
Fire Department, Salaries.....	350 00	Fire Dept., General Expenses.....	350 00
Inspection of Milk and Vinegar:—		Inspection of Milk and Vinegar:—	
Salaries	12 00	General Expenses	12 00
Interest	4,000 00	Abatements, Taxes.....	3,000 00
		Interest on Park Loans.....	1,000 00
Overseers of the Poor:—			
Farm, General Expenses.....	100 00	Overseers of the Poor, Farm, Labor	100 00
Outside Aid, General Expenses..	7,000 00	Contingent Fund.....	7,000 00
Park Department:—		Park Department:—	
Maintenance, Bath House.....	200 00	Maintenance, Shade Trees.....	750 00
Commons, etc.....	550 00		
Public Library, General Expenses.	50 00	Public Library, Salaries.....	50 00
Public Property:—		Public Property:—	
City Buildings, General Expenses	1,100 00	City Buildings, Salaries.....	1,100 00
Sanitary Arrangements.....	5,850 66	New School House, "Washington"	5,850 66
School Department:—			
Vacation Schools.	980 00		
Transportation of Pupils.....	200 00	Contingent Fund.....	1,180 00
Sealer of Weights and Measures:—		Sealer of Weights and Measures:—	
Salaries.....	60 00	General Expenses	60 00
Street Department:—		Street Department:—	
Construction, Athenaeum Street.	4,000 00	Construction, Munroe Street.....	4,000 00
Granite Street.....	2,800 00	Sundry streets, Wards 6 and 7	2,800 00
Wright Street.....	450 00	Sundry streets, Wards 6 and 7	450 00
Maintenance, General Expenses.	200 00	Maintenance, Salaries.	200 00
Rebuilding, Broadway	198 20	Street Department, Cleaning.....	1,033 47
Cambridge Street....	835 27		
Treasury Dept., General Expenses	125 00	Treasury Department, Salaries.....	125 00
Water Works:—		Water Works:—	
Maintenance, General Expenses.	1,914 00	Maintenance, Pumping.....	1,200 00
		Fresh Pond.....	233 00
		Payson Park.....	31 00
		Office, Salaries.....	450 00
	$46,775 13		$46,775 13

EXPENDITURES OF THE DIFFERENT DEPARTMENTS FROM 1893 TO 1902, INCLUSIVE.

NAMES OF DEPARTMENTS.	Expended in 1893.	Expended in 1894.	Expended in 1895.	Expended in 1896.	Expended in 1897.	Expended in 1898.	Expended in 1899.	Expended in 1900.	Expended in 1901.	Expended in 1902.
Ambulance Department	.....	$625 00	$2,269 15	$2,452 39	.....	.....	.....	.....	.....	.....
Assessors' Department	$10,922 58	10,919 65	12,797 40	12,943 24	$13,077 44	$13,552 25	$13,489 10	$13,498 95	$14,158 06	$13,430 51
Auditing Department	3,445 86	3,983 67	3,352 03	3,567 88	3,511 12	3,489 04	3,470 88	3,571 13	3,649 85	3,773 65
Cemetery Department	19,462 59	17,998 89	16,999 40	20,000 00	19,846 77	19,832 66	19,910 23	21,603 34	20,415 24	18,506 45
City Clerk Department	5,978 12	6,229 55	6,404 25	7,107 04	7,193 53	7,759 82	7,875 84	9,042 78	9,113 18	7,566 75
City Messenger Department	2,525 96	2,587 54	2,645 92	2,763 59	2,799 51	2,859 04	2,555 94	2,562 75	2,599 92	3,222 54
Civil Service Department	240 50	224 50	275 00	249 97	248 07	248 85	247 05	249 60	249 80	249 95
Clerk of Committees Departm'nt	3,526 06	3,597 37	3,708 47	3,925 34	3,946 56	3,972 39	3,968 90	3,970 47	3,990 23	3,999 02
Contingent Fund	10,847 07	15,348 28	14,514 68	16,139 18	7,966 46	11,064 33	13,099 91	25,944 42	16,940 96	13,293 92
Election Expenses	12,044 88	9,692 50	9,476 60	12,463 99	9,943 08	10,861 47	9,948 85	10,196 56	10,429 95	12,676 55
Engineering Department	9,644 00	15,279 50	22,743 52	14,211 55	12,969 29	11,147 34	11,224 85	11,187 79	11,050 64	10,257 33
Executive Department	4,641 40	4,825 08	5,362 15	5,414 08	5,299 35	5,184 26	5,182 88	5,263 48	5,394 49	5,388 00
Fire Department	61,627 27	72,488 69	82,171 99	85,467 88	78,687 13	80,152 89	84,900 23	90,362 64	91,120 04	93,083 78
Health Department	5,475 37	6,097 88	11,482 98	16,999 55	17,059 35	17,496 64	19,754 04	27,245 46	38,989 68	73,941 07
Inspection of Milk and Vinegar	1,298 76	1,350 00	1,388 14	1,586 24	1,583 90	1,499 56	1,500 00	1,499 37	1,670 25	1,674 28
Inspection of Provisions, etc	.....	756 06	747 89	793 60	796 19	798 12	793 60	798 05	797 45	777 00
Inspection of Wires	9,545 07	10,148 01	10,399 82	11,999 74	10,699 98	11,197 60	14,499 98	10,575 99	10,499 95	9,998 71
Interest	136,877 92	126,289 20	118,699 84	132,099 07	134,396 40	135,795 18	139,432 86	150,015 96	153,313 03	164,606 76
Lamp Department	66,615 93	68,988 81	69,926 61	67,325 31	69,264 96	69,182 20	71,980 42	71,998 78	72,775 75	74,249 64
Law Department	3,206 19	3,272 94	3,970 45	5,197 44	5,189 88	5,192 65	5,632 35	5,038 59	4,980 89	5,046 01
Overseers of the Poor Dept	97,570 17	100,810 42	100,841 33	105,379 81	106,373 80	103,983 80	104,845 15	106,154 82	106,629 67	96,747 36
Park Department	339 13	258,276 09	222,475 05	256,490 43	211,783 90	217,188 89	175,065 82	165,856 05	226,104 06	157,184 66
Plumbers' Examiners Dept	.....	119 95	153 81	101 05	116 40	111 50	98 75	115 00	115 00	.....
Police Department	111,581 80	110,244 91	110,784 22	110,111 14	113,550 42	116,762 59	116,998 35	123,774 68	128,458 58	131,251 70
Public Library	14,585 44	29,875 62	21,064 83	18,493 00	19,823 36	20,078 38	21,224 67	20,267 46	20,622 00	47,676 75
Public Property	149,280 61	187,922 57	154,289 89	176,264 31	222,216 56	258,628 93	332,503 41	167,857 33	201,949 94	123,694 74
School Department	238,018 21	248,265 10	258,766 08	272,481 50	282,400 45	295,673 51	335,372 89	357,691 51	368,233 67	374,024 76
Sealer of Weights and Measures	1,654 93	1,598 95	1,491 29	1,570 52	1,619 73	1,598 46	1,644 02	1,694 97	1,963 73	2,772 22
Sewer Department	40,597 04	92,635 43	87,553 59	106,688 27	64,231 45	52,828 90	84,996 28	108,581 11	105,215 71	87,001 99
Sinking Fund	104,095 00	100,390 00	106,940 00	93,765 00	104,725 00	111,937 50	118,750 00	133,824 00	137,643 50	136,300 16
State Aid	25,469 80	24,669 55	23,159 91	23,209 03	23,491 36	28,751 62	27,218 27	25,413 88	25,410 73	25,493 24
Stationery and Printing	2,533 89	2,739 13	2,843 14	2,939 79	2,847 32	2,869 03	2,983 88	3,021 32	3,199 56	.....
Street Dept. (Roads and Bridges)	243,032 63	285,348 54	259,953 37	323,912 86	412,986 18	249,167 53	326,637 84	373,083 10	509,593 38	551,159 13
Treasury Department	12,179 00	12,542 01	13,471 50	13,995 46	14,415 54	14,282 77	14,699 53	15,478 14	15,596 05	15,378 85
Water Works Department	430,846 12	420,688 47	758,054 81	1,045,529 76	794,197 98	634,583 00	367,048 88	353,607 18	367,545 83	356,468 85
Taxes:—Abatements	24,678 10	26,926 07	19,427 40	17,922 54	22,081 73	27,566 98	35,317 61	33,005 90	24,390 38	33,047 28
Armory	.....	.....	.....	.....	.....	.....	.....	.....	.....	4,154 46
County	63,569 57	68,110 25	73,887 84	78,321 11	73,887 84	79,914 80	87,085 65	85,997 56	100,429 89	100,184 86
Metropolitan Park	.....	.....	.....	.....	.....	.....	.....	.....	.....	96,478 96
Metropolitan Sewer	17,363 62	45,483 43	61,886 21	.....	137,297 30	56,818 94	74,763 08	73,018 92	72,344 93	78,252 17
National Bank	6,659 26	7,373 24	7,136 92	6,632 77	7,995 91	7,459 91	7,681 26	7,167 54	6,935 25	7,802 80
State	77,850 00	62,280 00	46,800 00	54,600 00	54,600 00	48,195 00	48,195 00	48,195 00	55,790 00	47,820 00
Total	$2,029,829 49	$2,467,001 85	$2,729,717 48	$3,131,115 43	$3,075,103 20	$2,739,688 33	$2,712,598 25	$2,668,431 58	$2,950,311 22	$2,988,636 86

COMPARATIVE STATEMENT BY DECADES FROM 1855 TO 1900.

	1855.	1865.	1875.	1885.	1895.	1900.
Population	20,637	29,112	47,838	59,660	81,643	91,886
Valuation.....	$15,437,100 00	$26,085,900 00	$66,623,014 00	$55,346,555 00	$80,911,060 00	$94,465,659 30
City Tax.....	100,6[illegible]4 53	267,708 60	1,060,396 52	804,800 00	1,103,455 30	1,395,452 98
County Tax....	10,137 78	18,280 99	37,580 73	29,381 54	73,887 84	85,997 56
State Tax.....	5,190 00	118,487 00	58,880 00	44,835 00	46,800 00	48,195 00
Tax rate per $1,000	7 10	15 00	17 00	15 50	15 70	16 90
Total Expenditures	173,533 58	536,911 82	2,605,267 74	2,354,298 69	3,686,702 54	3,371,183 99
City Debt.....	146,600 00	853,092 00	4,106,843 21	2,361,396 50	3,913,634 23	3,592,904 00
Expenditures by Depts:—						
Bridges	890 31	9,007 77	39,068 39	11,829 77	16,297 33	20,179 38
Cemeteries..	6,553 67	16,742 29	19,438 66	80,399 22	16,999 40	21,603 34
Fire Dept....	9,623 70	21,958 74	89,949 99	59,341 15	104,898 59	90,362 64
Lighting Sts.	2,987 32	9,062 24	20,919 04	32,269 07	69,926 61	71,998 78
Pauper Dept.	8,520 41	21,481 52	79,719 54	56,338 24	100,841 33	106,154 82
Police Dept .	4,499 56	22 833 14	71,093 35	78,357 73	110,784 22	123,774 68
Public Libr'y	.....	1,111 77	6,040 04	6,643 51	21,034 83	20,267 46
Schools.....	32,169 16	81,842 47	258,985 15	227,511 77	362,353 79	500,540 53
Sewers.....	4,610 68	3,683 07	135,432 28	40,945 40	149,459 89	108,581 11
Streets	14,554 73	35,638 38	155,476 90	148,088 65	252,154 62	279,497 94
Water Works	.....	20,327 79	234,431 03	485,691 04	758,054 81	353,607 18

SCHEDULE OF REAL ESTATE OWNED BY THE CITY OF CAMBRIDGE, AS SHOWN ON THE ASSESSORS' BOOKS, NOVEMBER 30, 1902.

Cambridge Cemetery: —			
54 8-10 acres of land		$60,000 00	
1 house		2,500 00	
			$62,500 00
Cambridge Public Library: —			
141,666 feet of land		85,000 00	
Library Building		115,000 00	
			200,000 00
Fire Department: —			
Hook and Ladder No. 2, Portland St.	$12,000 00		
11,931 feet of land	4,800 00		
		16,800 00	
Engine House No. 5, junction Cambridge and Hampshire Streets	10,000 00		
6,000 feet of land	5,000 00		
		15,000 00	
Engine House, south side Main, corner Deacon Street	12,000 00		
9,400 feet of land	7,300 00		
		19,300 00	
Engine House, Massachusetts Avenue	23,000 00		
9,532 feet of land	6,000 00		
		29,000 00	
Engine House No. 4, and stable, Massachusetts Avenue	5,300 00		
6,316 feet of land	3,700 00		
		9,000 00	
Engine House No. 6, River Street	12,000 00		
4,994 feet of land	2,500 00		
		14,500 00	
Engine House, east side Lexington Avenue	16,000 00		
15,262 feet of land	4,000 00		
		20,000 00	
Engine House, Massachusetts Avenue	26,000 00		
10,000 feet of land	10,000 00		
		36,000 00	
Engine House, Third Street	17,500 00		
10,100 feet of land	5,500 00		
		23,000 00	
			182,600 00
Overseers of the Poor Department: —			
14 242-1000 acres of land		21,000 00	
City Home buildings		25,000 00	
			46,000 00
Public buildings and lands: —			
City Hall, Massachusetts Avenue	200,000 00		
47,878 feet of land	72,000 00		
		272,000 00	
Amounts carried forward		$272,000 00	$491,100 00

Amounts brought forward . .		$272,000 00	$491,100 00
Public buildings and lands:—			
City Building, Mt. Auburn St . .	60,000 00		
16,153 feet of land	16,000 00		
		76,000 00	
West side Massachusetts Avenue, Wellesley and Vassar Street:—			
Armory, Lot 51,564 feet of land .		28,400 00	
Concord Avenue, House and Stable .	2,000 00		
7 48-100 acres of land	4,500 00		
		6,500 00	
East side Pearl St, Lot 2,635 ft. land		1,000 00	
West side Rockingham St., Lot 1,369 feet		400 00	
Contagious Hospital, 59 Reservoir St., 1 house	3,600 00		
16,624 feet of land	3,300 00		
		6,900 00	
City Building, Green Street . .	50,000 00		
13,028 feet of land	10,500 00		
		60,500 00	
Police Station, Fourth Street . .	20,000 00		
4,220 feet of land	2,100 00		
		22,100 00	
			473,800 00
Street Department:—			
Stables, sheds and scales, Hampshire Street	16,000 00		
72,661 feet of land	30,000 00		
		46,000 00	
City Stables, west side Raymond St. .	27,000 00		
272,670 feet land	27,000 00		
		54,000 00	
			100,000 00
Park Department:—			
Park, Boylston, Mt. Auburn and Winthrop Streets, 11,565 feet of land .		17,000 00	
Park, south side Broadway, 107,181 feet of land		54,000 00	
Park, Hastings Square, 30,000 feet of land		9,000 00	
Park, Dana Square, 33,531 feet of land		12,000 00	
Park, Pleasant Street, 1,372 feet of land		1,000 00	
Park, Pleasant and River Streets, 1,569 feet of land		1,200 00	
Fort Washington, east side Waverley Street, 42,123 feet of land . .		8,000 00	
Mill Pond Property, north side River Street, west side Blackstone Street 41,546 feet		17,000 00	
Lot east side Portland Street, 18,011 ft.		5,500 00	
Lot east side Norfolk Street, 39,600 ft.		12,000 00	
38 lots, Western Avenue, Putnam Avenue, Bancroft, Gilmore and Montague Streets, 119,085 feet .		27,000 00	
Lot, Second Street, 26,357 feet . .		5,200 00	
Lot, west side Reed Street, 1,500 feet		100 00	
Amounts carried forward . . .		$169,000 00	$1,064,900 00

Amounts brought forward . .		$169,000 00	$1,064,900 00
Park Department:—			
Lot, Walden Street, 16,365 feet .		1,600 00	
Flats south side Main Street, 86,500 ft.		7,600 00	
Common, Garden St., Massachusetts Ave. and Waterhouse St., 370,785 ft.		370,000 00	
Park, Massachusetts Ave., Kirkland and Cambridge Sts., 33,357 feet .		66,000 00	
Park, Massachusetts Avenue and Harvard Square, 23,074 feet . .		46,000 00	
Park, Massachusetts Ave. and Holmes Place, 20,956 feet		42,000 00	
Park, Rindge Avenue and Groveland Street, 501,729 feet . . .		10,000 00	
Mt. Auburn Street, 60,508 feet . .		9,000 00	
Ward 3, Charles River Parkway 359,300 feet		70,000 00	
Ward 4, N. S. River, 20,100 ft. of land		not valued	
Buildings, bath-house and locker-house		3,000 00	
New bath-house		1,000 00	
Lot, south side Main, cor Deacon rear, 86,500 feet of land . . .		7,600 00	
Fresh Pond Lane and Huron Avenue, 46,479 feet		6,900 00	
Ward 2, Cambridge Field, Shelter House	28,000 00		
528,154 feet of land	158,000 00		
		186,000 00	
Building, north side Main and First Street, wharf	2,000 00		
5,605 feet of land	5,600 00		
		7,600 00	
Wharf and flats south side Deacon street, 12,210 feet		1,000 00	
Triangular lot. Massachusetts Avenue and Arrow Street. 872 feet . .		1,700 00	
Burial ground, Massachusetts Avenue and Garden Street, 85,858 feet .			
Triangular lot, Chauncey and Garden Streets, 3,189 feet		2,000 00	
Buildings and lands, north side Bridge		1,000 00	
			1,009,000 00
SCHOOLHOUSES AND LANDS.			
Ward One.			
Taylor Schoolhouse	$36,000 00		
23,592 feet of land	6,000 00		
		42,000 00	
Gore Primary, Gore Street . . .	36,000 00		
9,900 feet of land	4,000 00		
		40,000 00	
Ward Two.			
Putnam Grammar, Fourth and Otis Streets	65,000 00		
14,400 feet of land	9,800 00		
		74,800 00	
Amounts carried forward . . .		$156,800 00	$2,073,900 00

Amounts brought forward . .		$156,800 00	$2,073,900 00
Thorndike Grammar, Thorndike St. .	30,000 00		
10,027 feet of land	4,000 00		
		34,000 00	
Lassell Primary, Charles Street . .	8,000 00		
10,000 feet of land	3,000 00		
		11,000 00	
Otis Primary, Otis Street . . .	20,000 00		
8,270 feet of land	4,000 00		
		24,000 00	
Ward Three.			
Wellington Training, Columbia Street	50,000 00		
18,870 feet of land . . .	6,600 00		
		56,600 00	
Gannett (old) Primary, Columbia St. .	2,000 00		
8,803 feet of land	2,600 00		
		4,600 00	
Gannet (new) Primary, Jefferson St. .	12,000 00		
15,434 feet of land	3,000 00		
		15,000 00	
Willow St. School, west side Willow St.			
25,536 feet of land		7,600 00	
Ward Four.			
Allston Grammar, Boardman Street .	30,000 00		
15,193 feet of land	4,600 00		
		34,600 00	
Bridge Primary, Pioneer Street . .	500 00		
4,646 feet of land	1,400 00		
		1,900 00	
Sargent Primary, Broadway . .	3,000 00		
9,995 feet of land	5,000 00		
		8,000 00	
Stearns Primary, Harvard Street . .	3,000 00		
10,050 feet of land	5,000 00		
		8,000 00	
Parker Primary, south side Broadway .	15,000 00		
12,319 feet of land	7,000 00		
		22,000 00	
Roberts School, Harvard Street . .	48,000 00		
16,400 feet of land	7,200 00		
		55,200 00	
Ward Five.			
Merrill School Fayette Street . .	45,000 00		
37,828 feet of land	19,000 00		
		64,000 00	
Harvard Grammar, Inman Street . .	65,000 00		
20,494 feet of land	12,000 00		
		77,000 00	
Amounts carried forward . .		$580,300 00	$2,073,900 00

Amounts brought forward .		$580,300 00	$2,073,900 00
Dana Primary, Centre Street . .	2,000 00		
14,317 feet of land	4,300 00		
		6,300 00	
Felton Primary, Amory Street . .	10,000 00		
15,090 feet of land	4,500 00		
		14,500 00	
Ward Six.			
Boardman Primary, Winsor Street .	13,500 00		
10,018 feet of land	4,000 00		
		17,500 00	
Willard Primary, Lake Street . .	25,000 00		
20,079 feet of land	5,000 00		
		30,000 00	
Morse Schoolhouse, Allston and Brookline Streets	73,000 00		
25,650 feet of land	7,000 00		
		80,000 00	
Ward Seven.			
Tarbell Primary, Grigg Street . .	10,000 00		
19,500 feet of land . . .	4,900 00		
		14,900 00	
Webster Grammar, Upton Street . .	50,000 00		
25,839 feet of land	9,000 00		
		59,000 00	
Ward Eight.			
New Latin School	225,000 00		
English High School, Broadway . .	220,000 00		
154,125 feet of land	92,000 00		
		537,000 00	
Manual Training School, Broadway . Irving and Felton Streets: —			
Land 81,128 feet	48,000 00		
Building and appliances . . .	56,000 00		
		104,000 00	
Riverside Primary, Putnam Avenue .	5,500 00		
11,199 feet of land	3,500 00		
		9,000 00	
S. S. Cambridge Street Schoolhouse .	65,000 00		
16,000 feet of land	9,000 00		
		74,600 00	
Ward Nine.			
Washington Grammar, Brattle Street .	30,000 00		
14,951 feet of land	12,000 00		
		42,000 00	
Corlett Grammar, Holworthy Street .	3,000 00		
10,000 feet of land	2,000 00		
		5,000 00	
Amounts carried forward . . .		$1,574,100 00	$2,073,900 00

Amounts brought forward . .		$1,574,100 00	$2,073,900 00
Agassiz Primary, Sacramento Street .	18,000 00		
19,689 feet of land	8,000 00		
		26,000 00	
Cushing Primary, Cushing Street .	3,000 00		
14,789 feet of land	1,500 00		
		4,500 00	
Dunster Primary, Concord Avenue .	4,000 00		
10,000 feet of land	3,000 00		
		7,000 00	
Holmes Primary, Hilliard Street . .	6,000 00		
11,182 feet of land	6,600 00		
		12,600 00	
Lowell Primary, Lowell Street . .	7,000 00		
12,033 feet of land	3,600 00		
		10,600 00	
Russell School, Larch Street .	40,000 00		
33,073 feet of land	6,000 00		
		46,000 00	
Ward Ten.			
Peabody Grammar, Linnæan Street .	68,000 00		
21,813 feet of land	9,800 00		
		77,800 00	
Ward Eleven.			
Shepard Grammar, Massachusetts Ave.	20,000 00		
14,755 feet of land	7,000 00		
		27,000 00	
Reed Primary, Reed Street . . .	4,000 00		
12,000 feet of land	1,200 00		
		5,200 00	
Wyman Primary, Rindge Avenue . .	6,000 00		
14,347 feet of land	4,000 00		
		10,000 00	
Sleeper School, Dudley Street . .	29,000 00		
21,284 feet of land	5,000 00		
		34,000 00	
Schoolhouse, Norris Street . . .	50,000 00		
25,700 feet of land	6,000 00		
		56,000 00	
			1,890,800 00
Sewer Department: —			
23,707 feet of land, Pilgrim Street .	5,900 00		
Stables, shed, house and building .	4,100 00		
			10,000 00
Water Works: —			
House, shop and stables, south side Concord Avenue	4,000 00		
27 33-100 acres of land . . .	16,700 00		
		20,700 00	
Land, south side Concord Avenue, 5-8 acre		300 00	
Amounts carried forward . . .		$21,000 00	$3,974,700 00

Amounts brought forward . .		$21,000 00	$3,974,700 00
Water Works :—			
Land, east side Woodlawn Avenue 15,735 feet		800 00	
Lot, rear of Grove Street, 272,800 feet		2,000 00	
Lot, south side Concord Avenue, 99,000 feet		1,000 00	
Land, south side Concord Avenue, 11,220 feet		100 00	
Two lots, south side Concord Avenue, 219,400 feet		2,200 00	
Gate-house lot, Concord Avenue, 43,560 feet		400 00	
Lot, south side Concord Avenue, 24,100 feet		300 00	
Fresh Pond Lane, 11 1-4 acres of land		11,000 00	
Kingsley Park, Fresh Pond Lane, 309,336 feet		8,000 00	
Lot rear Fresh Pond Lane, 364,608 ft.		3,500 00	
Lot, Woodlawn Avenue, 107,616 feet		8.000 00	
Lot, Woodlawn Avenue, 26,989 feet .		1,600 00	
Lot, rear Fresh Pond Lane, 239,541 ft.		5,000 00	
Lot, Woodlawn Avenue, 91,040 feet .		2,000 00	
Lot, Holworthy Street, 18,480 feet .			
Lot, south side Huron Avenue, 22,348 feet		700 00	
Lot, east side Cushing Street, 41,053 feet		800 00	
Lot, Cushing Street, corner Woodlawn Avenue, 95,482 feet . .		2,000 00	
Lot, Woodlawn Avenue, 24,096 feet .		1,900 00	
Lot, east side Cushing Street, 639,550 feet		4,000 00	
Two lots, near Fresh Pond and Adams Place, 110,891 feet		1,000 00	
Land, Adams Place, 160,597 feet .		3,200 00	
Lot, Woodlawn Avenue, 25,216 feet of land		1,200 00	
Land, Woodlawn Avenue, 133,336 feet		not valued	
Gravel pit, south side Concord Avenue, 397,417 feet		3,000 00	
190,500 feet of land, Huron Avenue .		4,300 00	
Lot, south side Huron Avenue, 91,112 feet		500 00	
Near Concord Avenue, 4 1-2 acres .		5,000 00	
Adams Place, 419,222 feet of land .		10,000 00	
South side Concord Avenue, 10,805 feet of land		500 00	
South side Concord Avenue, 32,425 feet of land		700 00	
South side Concord Avenue, 62,000 feet of land		1,200 00	
Lot, Huron Avenue, 1 3-4 acres . .		1,000 00	
Concord Avenue, 294,000 feet of land		3,000 00	
Tudor Park, near Concord Avenue, 57,312 feet of land			
Pumping Station, Worthington Street	$50,000 00		
Dwelling house	2,000 00		
90,414 feet of land	18,000 00		
		70,000 00	
Amounts carried forward . . .		$180,900 00	$3,974,700 00

Amounts brought forward . .		$180,900 00	$3,974,700 00
Water Works :—			
One house and stable, Lexington Avenue, Lake View Avenue and Vassal Lane	14,900 00		
88,077 feet of land	13,300 00		
		28,200 00	
Two houses, stable, sheds and building, south side Auburn Street .	5,700 00		
33,847 feet of land	6,600 00		
		12,300 00	
Lot, Grove Street, 150,000 feet . .		1,500 00	
Buildings, Grove Street . . .	5,000 00		
519,000 feet of land	6,000 00		
		11,000 00	
Lot, Fresh Pond Lane, corner Huron Avenue, 46,479 feet . . .		6,900 00	
North side Huron Avenue, Lot 211,835 feet		20,000 00	
			260,800 00
Total			$4,235,500 00

EXEMPTED PROPERTY.

The following is a schedule of property used for religious, charitable and educational purposes, and exempt from taxation by law, including property owned by the county of Middlesex not including that owned by the City of Cambridge, as shown on the Assessors' Books, November 30, 1902 : —

Ward One.

Trinity Methodist Episcopal Church : —			
Church, Cambridge, corner Third Street	$25,000 00		
6,500 feet of land	16,300 00		
		$41,300 00	
Massachusetts Baptist Convention, Trustee : —			
Church, Cambridge and Fourth Streets	25,000 00		
6,000 feet of land	11,000 00		
		36,000 00	
Church of the Ascension : —			
Church, Third and Thorndike Streets	5,000 00		
4,800 feet of land	4,000 00		
		9,000 00	
County of Middlesex : —			
Court House, Third, Otis and Thorndike Streets	208,500 00		
Court House, Second, Otis and Thorndike Streets	180,000 00		
59,572 feet of land	60,000 00		
		448,500 00	
Registry of Deeds : —			
Cambridge, Otis, Second and Third Streets	376,000 00		
59,380 feet of land	60,000 00		
Law Library	50,000 00		
		486,000 00	
Amount carried forward . . .		$1,020,800 00	

Amount brought forward . .		$1,020,800 00	
House of Correction, jail and shops, Thorndike, Third, Spring and Second Streets	425,000 00		
59,880 feet of land	30,000 00		
		455,000 00	
St. John's Literary Institute: —			
Hall and stores, Cambridge Street, ⅔ value	20,000 00		
½ of 6,300 feet of land . . .	4,700 00		
Cash assets	4,838 58		
		29,538 58	
			1,505,338 58
Ward Two.			
Second Universalist Society: —			
Church, Otis Street	16,000 00		
5,950 feet of land	3,500 00		
		19,500 00	
Church of the Sacred Heart: —			
Church, Sixth, Otis and Seventh Streets	70,000 00		
15,400 feet of land	6,200 00		
		76,200 00	
Sacred Heart School Association: —			
St. John's Church, east side Fourth Street	5,000 00		
7,005 feet of land	4,200 00		
11,000 feet of land on Seventh Street	3,300 00		
Schoolhouse	150,000 00		
		162,500 00	
			258,200 00
Ward Three.			
Roman Catholic Archbishop of Boston,			
Building, west side Portland Street .	7,000 00		
3,687 feet of land	1,500 00		
			8,500 00
Ward Four.			
Broadway Baptist Church: —			
Church, west side Boardman street .	30,000 00		
11,620 feet of land	8,000 00		
		38,000 00	
Cambridgeport Unitarian Society: —			
Church, north side Austin Street .	18,000 00		
13,116 feet of land	8,000 00		
		26,000 00	
Harvard Street Methodist Episcopal Society: —			
Church, north side Harvard Street .	22,000 00		
10,030 feet of land	8,000 00		
		30,000 00	
Amounts carried forward . . .		$94,000 00	$1,772,038 58

Amounts brought forward . .		$94,000 00	$1,772,038 58
St. Paul's African M. E. Church: —			
Church, north side of Hastings Street	7,500 00		
3,186 feet of land	1,400 00		
		8,900 00	
Hope Congregational Church: —			
Church, north side Harvard Street .	8,000 00		
6,000 feet of land	3,000 00		
		11,000 00	
Swedish Evangelical Missionary Church of Cambridge, 146 Hampshire Street, 3,879 feet of land		1,600 00	
St. Stephen's Baptist Church Buildings, 187-189 Broadway	500 00		
2,840 feet of land	1,100 00		
		1,600 00	
St. Mary's Parochial School: —			
Church, west side Norfolk, corner Harvard Street	45,000 00		
Girl's School, south side Harvard Street	60,000 00		
Boys' School, east side Essex Street .	18,000 00		
Sisters' Home, 50 and 52 Essex Street	7,000 00		
49,928 feet of land	20,000 00		
Theatre, east side Norfolk Street .	15,000 00		
13,032 feet of land	6,500 00		
Gymnasium, east side Prospect Street	35,000 00		
11,370 feet of land	5,600 00		
House, 121 Norfolk Street . . .	7,500 00		
7,500 feet of land	2,300 00		
		221,900 00	
St. Bartholomew's Church, west side Columbia Street	6,000 00		
Building	500 00		
5,075 feet of land . . .	1,500 00		
		8,000 00	
Congregation Beth Israel of Cambridge:			
East side Columbia, near Market, Synagogue (unfinished) . . .	10,000 00		
8,784 feet of land	2,600 00		
		12,600 00	
			359,600 00
Ward Five.			
Baptist Church, Trustees of funds of: —			
Chapel, Hampshire Street . . .	3,000 00		
2,500 feet of land	800 00		
		3,800 00	
First Evangelical Congregational Society: —			
Church, west side Prospect Street .	40,000 00		
19,513 feet of land	12,000 00		
		52,000 00	
First Free Baptist Church: —			
Church, north side Harvard Street .	9,000 00		
6,250 feet of land	4,700 00		
		13,700 00	
Amounts carried forward		$69,500 00	$2,131,638 58

Amounts brought forward . .		$69,500 00	$2,131,638 58
First Free Baptist Church : —			
Church, north side Hampshire Street	3,000 00		
3,851 feet of land	1,500 00		
		4,500 00	
First Universalist Society of Cambridge : —			
Church, east side Inman Street .	20,000 00		
15,312 feet of land	11,300 00		
		31,300 00	
First Reformed Presbyterian Church, west side Antrim Street . .	7,500 00		
5,000 feet of land	2,000 00		
		9,500 00	
First United Presbyterian Church : —			
Church, south side Cambridge Street	6,000 00		
9,173 feet of land	4,600 00		
		10,600 00	
Holy Ghost Hospital for Incurables, Cambridge Street : —			
72,310 feet of land		10,000 00	
Cambridge Young Women's Christian Association : —			
Personal property		15,750 00	
			151,150 00
Ward Six.			
Immanuel Baptist Church : —			
Church, east side Magazine Street .	25,000 00		
11,250 feet of land	3,000 00		
		28,000 00	
First Swedish Baptist Church of Cambridge : —			
One house, 77 Columbia Street . .	2,000 00		
2,765 feet of land	1,200 00		
		3,200 00	
Grace Methodist Episcopal Church : —			
Church, east side Magazine Street .	15,000 00		
7,750 feet of land	5,000 00		
		20,000 00	
Massachusetts Baptist Convention — Union Baptist Church : —			
Church, 874 Main Street . . .	14,500 00		
3,900 feet of land	18,400 00		
		32,900 00	
Baptist Home, 80 Chestnut Street, and 308 Brookline Street, one house and stable	11,500 00		
Personal property	2,980 54		
21,300 feet of land	10,000 00		
		24,480 54	
The Lamson Home, 322 Brookline Street, one house	5,000 00		
5,000 feet of land	2,000 00		
Personal property	9,637 64		
		16,637 64	
Amounts carried forward . . .		$125,218 18	$2,282,788 58

Amounts brought forward . .		$125,218 18	$2,282,788 58
Mount Olive Baptist Church and Willard Welsh, for tax: —			
Building, State Street . . .	1,500 00		
5,000 feet of land	2,500 00		
		4,000 00	
Mount Olive Baptist Church, south side Front Street, Church . . .	18,000 00		
5,000 feet of land	2,500 00		
		20,500 00	
East End Union Mission: —			
Church, west side Burleigh Street on Rogers' land		3,500 00	
Rush African M. E. Zion Church: —			
Church, south side School Street .	6,000 00		
2,760 feet of land	1,100 00		
		7,100 00	
St. Philip's Church, Episcopal: —			
Church, north side Allston Street .	3,000 00		
4,646 feet of land	1,200 00		
		4,200 00	
Wood Memorial Church, Congregational: —			
Church, west side Columbia, corner Austin Street	30,000 00		
7,500 feet of land	4,000 00		
		34,000 00	
			198,518 18
Ward Seven.			
Cambridge Young Men's Christian Association: —			
Personal property	14,302 49		
New building, Massachusetts Avenue	115,000 00		
24,145 feet of land	19,000 00		
		148,302 49	
First Baptist Society: —			
Church, Central Square . . .	80,000 00		
21,400 feet of land	20,000 00		
		100,000 00	
First Church of the Evangelical Association of North America: —			
Church, 44 William Street . .	5,000 00		
6,750 feet of land	2,700 00		
		7,700 00	
Pilgrim Congregational Church: —			
Church, west side Magazine Street .	30,000 00		
12,415 feet of land	9,300 00		
		39,300 00	
Protestant Episcopal Church, Trustees of Donations to: —			
Church, south side Massachusetts Avenue (St. Peter's) . . .	10,000 00		
9,229 feet of land	9,200 00		
		19,200 00	
Amounts carried forward . . .		$314,502 49	$2,481,306 76

Amounts brought forward . .		$314,502 49	$2,481,306 76
Prospect Union Association: —			
Personal property	12,188 55		
Building, 744 Massachusetts Avenue	4,700 00		
11,449 feet of land	12,800 00		
		29,688 55	
Stratton, Chas. F., Allen K. Sweet, and Edwin S. Chapin, Trustees: —			
Building, west side Ballard Place .	6,000 00		
4,344 feet of land	1,100 00		
		7,100 00	
			351,291 04
Ward Eight.			
Epworth Methodist Episcopal Church: —			
Church, Massachusetts Avenue .	80,000 00		
11,248 feet of land	10,000 00		
		90,000 00	
Old Cambridge Baptist Society: —			
Church, Massachusetts Avenue and Harvard Street	71,000 00		
34,573 feet of land	69,000 00		
		140,000 00	
St. Paul's Roman Catholic Church: —			
Mount Auburn Street . . .	30,000 00		
11,216 feet of land	22,000 00		
		52,000 00	
St. Paul's Catholic School Association: —			
Personal property	4,000 00		
School building	59,000 00		
House, Arrow and Mount Auburn Streets	8,000 00		
32,900 feet of land	49,000 00		
		120,000 00	
Holy Ghost Hospital for Incurables: —			
Personal property	7,694 00		
Building and house, Cambridge Street	56,000 00		
209,126 feet of land	62,000 00		
		125,694 00	
The Corporation of the New Church Theological School: —			
New chapel	15,000 00		
Personal property	142,906 00		
Two houses and stable, 42-48 Quincy Street	16,000 00		
81,450 feet of land	81,000 00		
		254,906 00	
President and fellows of Harvard College: —			
Personal property	11,234,113 40		
Dormitories, chapels, laboratories, museums, lecture rooms and houses, including property in Wards 9 and 10	6,708,800 00		
		17,942,913 40	
Jane Wilson (widow of disabled soldier),			
House, 9 Elmer Street . . .	900 00		
1,275 feet of land	300 00		
		1,200 00	
			18,726,713 40
Amount carried forward . . .			$21,559,311 20

Amount brought forward . .			$21,559,311 20
	Ward Nine.		
Christ Church, Episcopal, Garden St.: —			
Church and Parish House . . .	22,000 00		
22,701 feet of land	22,000 00		
		44,000 00	
First Parish Church, Unitarian: —			
Church, Massachusetts Avenue .	57,000 00		
14,831 feet of land	43,000 00		
		100,000 00	
Cambridge Social Union: —			
Personal property	2,000 00		
House, No. 42 Brattle Street . .	5,000 00		
13–22 of hall	8,100 00		
10,000 feet of land	4,900 00		
		20,000 00	
Shephard Congregational Society: —			
Church, Garden Street . . .	110,000 00		
34,353 feet of land	34,000 00		
		144,000 00	
St. Peter's Roman Catholic Church: —			
Concord Avenue	45.000 00		
33,700 feet of land	11,000 00		
		56,000 00	
St. Peter's Parish Hall Corporation: —			
Stores and hall, 70 Concord Avenue .	39,500 00		
11,850 feet	3,500,00		
		43,000 00	
Cambridge Hospital: —			
Personal property	238,343 90		
Buildings, Mount Auburn Street .	94,000 00		
Land	143,000 00		
		475,343 90	
Cambridge Home for Aged People: —			
Personal property . . .	90,320 97		
Building, Mount Auburn Street .	60,000 00		
42,975 feet of land	20,000 00		
		170,320 97	
Longfellow Memorial Association: —			
Personal property . . .	17,113 30		
Park, south side Brattle Street, 93,618 feet	56,000 00		
		73,113 30	
Episcopal Theological School, Trustees of: —			
Personal property	134,476 00		
Chapel, seminary and dormitories, Brattle and Mason Streets, and Hastings Avenue	329,000 00		
		463,476 00	
Avon Home, Mount Auburn Street: —			
Building	22,000 00		
69,470 feet of land	28,000 00		
Personal property	113,454 70		
		163,454 70	
Amounts carried forward . . .		$1,752,708 87	$21,559,311 20

Amounts brought forward . .		$1,752,708 87	$21,559,311 20
Radcliffe College : —			
Personal property	300,270 58		
Five houses, laboratory, schoolhouse and gymnasiums, Garden, Brattle, Mason and James Street, 163,296 feet of land, includng Ward 10 property	344,400 00		
		644,670 58	
Metropolitan Park, 29 acres and 397,465 feet		130,500 00	
			2,527,879 45
Ward Ten.			
North Avenue Congregational Society : —			
Church, Massachusetts Avenue .	32,000 00		
13,430 feet of land	8,000 00		
		40,000 00	
Fitchburg Railroad Co. : —			
371 Concord Avenue, 1 house . .		500 00	
			40,500 00
Ward Eleven.			
Catholic Cemetery, Rindge Avenue, 304,014 feet of land		30,000 00	
Third Universalist Society : —			
Church, Massachusetts Avenue . .	30,000 00		
14,880 feet of land	11,000 00		
		41,000 00	
Trustees of Donations to the Protestant Episcopal Church : —			
Church and chapel, Massachusetts Avenue and Beech Street . .	75,000 00		
21,207 feet of land (cemetery lot included)	12,700 00		
		87,700 00	
Abbott, Edward, Trustee for, west side Beech Street : —			
Lot, 7,965 feet of land . . .		3,200 00	
North Avenue Baptist Society : —			
Church, Massachusetts Avenue .	55,000 00		
38,525 feet of land	19,000 00		
		74,000 00	
Williams, John J., south side Rindge Avenue : —			
Schoolhouse	40,000 00		
20,220 feet of land	4,000 00		
		44,000 00	
Amounts carried forward . . .		$279,900 00	$24,127,690 65

Amounts brought forward . .		$279,900 00	$24,127,690 65
Marist Fathers of Boston, French Roman Catholic Church : —			
Personal property	1,500 00		
Church, north side Harvey Street .	40,000 00		
14,645 feet of land	3,000 00		
		44,500 00	
Weymouth, Harrison, G. O , (disabled soldier) : —			
Orchard Street, 4,800 feet of land .		1,900 00	
			326,300 00
Total			$24,453,990 65

SCHEDULE OF CITY PROPERTY

AS FURNISHED BY

EXECUTIVE BOARDS AND HEADS OF DEPARTMENTS

IN

1900

BRIDGE DEPARTMENT.

Bridge.	Description of Buildings.	Value of Buildings.	Total.
Prison Point	House occupied by Drawtender	$1,200 00	
Craigie	House occupied by Drawtender	1,200 00	
"	Engine house and sheds	500 00	
"	Houses on pier, Cambridge end	800 00	
"	Boiler and engine for moving draw	200 00	
Harvard	House on pier and shed	800 00	
Brookline Street	Houses	600 00	
River Street	Two small houses	200 00	
Western Avenue	One small house	100 00	
North Harvard Street	Two small houses	150 00	$5,750 00

CAMBRIDGE CEMETERY.

60 1-10 acres of land	$60,000 00	
1 house	2,500 00	
Personal property	2,000 00	
		$64,500 00

Purchased in 1853 and 1885.

ELECTRICAL DEPARTMENT.

LAMPS.

279 lamp posts in streets valued at $10.00 each	$2,790 00	
Office furniture	131 00	
Stock on hand in City Hall	190 00	
Stock on hand in Central Square building	285 00	
Horse and wagon	440 00	
		$3,836 00

WIRES.

Fire alarm apparatus and machinery	$13,220 00	
Fire alarm supply and reserve apparatus	915 00	
Fire alarm circuit wires and cross-arms (cost)	1,990 00	
95 fire alarm boxes	5,600 00	
Police signal apparatus and machinery	3,020 00	
Police signal supply and reserve apparatus	155 00	
Police signal circuit wires and cross-arms (cost)	2,320 00	
Police signal 1-10 mile cable	165 00	
80 police boxes	11,850 00	
Testing instruments	465 00	
Tools	550 00	
Furnishings	450 00	
Stock on hand	875 00	
Old and disused apparatus (depreciated value)	600 00	
Miscellaneous supplies	130 00	
Horses and wagons	260 00	
Building in Belmont school-yard	400 00	
		$42,965 00

ENGINEERING DEPARTMENT.

PERSONAL PROPERTY.

4 transits	$400 00
2 levels	150 00
Miscellaneous small tools	100 00
Drawing instruments and stock	75 00
Furniture	200 00
Typewriting machine	75 00
Plans, 5,750	25,000 00
Total	$26,000 00

FIRE DEPARTMENT.

REAL ESTATE.

Location.	Feet of Land.	Purchase of Land.	Erection of Building.	Value of Land.	Value of Building.
Engine House No. 2, } 384 Mass Ave. }	.....	.....	.....	.....	.....
Ladder House No. 3, } 394 " " }	10,000	.....	1893	$8,000	$26,000
Engine House No. 3, 35 Third St	10,100	1895	1895	5,500	17,500
Engine House No. 4, 2029 Mass. Ave	9,532	1896	1896	6,000	23,000
Engine House No. 5, Inman Sq.....	6,000	1874	1874	5,000	10,000
Engine House No. 6, 176 River St.....	4,994	1890	1890	2,500	12,000
Engine House No. 7, 350 Main St.....	9,400	.....	1894-1895	7,300	12,000
Chemical Engine House No. 2, 167 Lexington Ave.....	15,262	1893	1893-1894	4,000	16,000
Ladder House No. 2, 276 Portland St....	11,931	.....	1887	3,000	12,000
				$41,300	$128,500

PERSONAL PROPERTY.

Apparatus	$59,800 25	
Bedding	1,534 25	
Furniture	3,596 90	
Horses and harnesses	11,201 00	
Tools	1,428 85	
Fire hats, badges, buttons, etc.	948 25	
		$78,509 50

BOARD OF HEALTH.

PERSONAL PROPERTY.

Temporary Hospital furnishings	$900 00	
Laboratory furnishings	268 00	
Office furniture	150 00	
Typewriter	100 00	
1 horse	165 00	
1 ambulance	585 00	
1 Beverly wagon	175 00	
1 van	100 00	
2 sets harness	50 00	
Blankets and horse covers	20 00	
16 disinfecting lamps	100 00	
		$2,613 00

INSPECTION OF MILK AND VINEGAR DEPARTMENT.

PERSONAL PROPERTY.

12 platinum milk dishes	$175 00	
1 balance	15 00	
1 drying oven	6 00	
1 Babcock tester	3 00	
Chemicals, glassware and chemical apparatus	15 00	
		$214 00

CITY HOME ESTATE.

Thirty-two (32) acres land bought Aug. 7, 1849.
Present City Home completed and placed under the care of the Overseers of the Poor, April 3, 1851.

Land cost	$12,000 00
City Home cost	32,970 69
Fences, furniture, etc., cost	3,000 00
Total	$47,970 69

Hospital cottage on City Home grounds built in 1886 at a cost of	$1,830 00
Two-story brick building erected 1888 cost	5,600 00

Land situated in Cambridge	14 242-1,000 acres
" " " Somerville	7 954-1,000 "
" " " Arlington	100-1,000 "
Lands (salable) on plan of April 10, 1884: — 30 lots of 5,000 feet each (in Somerville),	3 443-1,000 "
Total acres of land	25 739-1,000 "

About seven acres of City Home land lying south of Broadway in West Somerville has been sold for house lots. The remaining lots (30) contain 150,000 square feet, and have been held at a valuation of four cents per square foot, but are probably worth much more at the present time.

The valuation of the City Home real estate by the assessors is:—

$25,000 00	for the buildings and
15,000 00	" " land
Total	$40,000 00

INVENTORY

of personal property at the City Home, Dec. 1, 1899: —

Book-keeping account books, stationery, etc.	$125 00	
Drugs, medicines and hospital supplies	325 00	
Dry goods, clothing, bedding, etc.	3,600 00	
Farm and stable: horses, cows, pigs, fowls, tools, wagons, fertilizers, produce, etc.	4,100 00	
Fuel	1,200 00	
House supplies, furniture, carpets, etc.	3,000 00	
Ledge: steam boiler, steam drill and tools	1,000 00	
Offal Dept.: wagons, pungs, horses, harnesses, etc.	5,300 00	
Outside aid: delivery wagons, groceries, etc.	400 00	
Provisions: groceries, spices, etc.	300 00	
Repairs: tools, lumber, lime, cement, hardware, etc.	400 00	
		$19,750 00

PARK DEPARTMENT.

REAL ESTATE.

	Feet of Land.	Rate per Foot.	Value.
River Parkway:—			
Section A	395,174	$1 00	$395,174 00
" B	859,000	2 00	1,718,000 00
" C	583,082	25 cts.	145,770 50
" D	1,668,709	cost	174,445 18
" F	605,084	cost	88,761 69
" G	699,948	60 cts.	419,968 80
" H	62,858	cost	11,426 49
Cambridge Field	528,154	cost	203,302 50
Rindge Field and Nursery	501,729	30 cts.	150,518 70
East Cambridge Embankment	363,825	cost	131,986 74
Commons and Squares:—			
Garden St., Massachusetts Ave. and Waterhouse St.	370,785	.....	200,000 00
Massachusetts Ave , Kirkland and Cambridge Sts	33,357	.....	.....
Massachusetts Ave. and Peabody St	23,074	.....	.....
Massachusetts Ave. and Holmes Pl	20,956	.....	77,000 00
Massachusetts Ave. and Waterhouse St	13,181	.....	13,000 00
Washington Elm	886	.....	550 00
Broadway Common	107,181	.....	54,000 00
Fort Washington	42,123	.....	8,000 00
Dana Sq	33,531	.....	12,000 00
Hastings Sq	30,000	.....	9,000 00
Winthrop Sq. (approx.)	11,611	.....	11,000 00
Arsenal Sq	3,189	.....	2,000 00
Pleasant and River Sts	1,569	.....	1,200 00
Pleasant St. and Western Ave	1,372	.....	1,000 00
Massachusetts Ave. and Arrow St	872	.....	800 00
Total value of real estate			$3,828,904 60

PARK DEPARTMENT.

PERSONAL PROPERTY

Stock at nursery	$1,500 00	
Office furniture	500 00	
Bathing suits and towels	500 00	
Horses (2) and harnesses	350 00	
Carriage and wagons	350 00	
Tools, etc.	300 00	
Total value of personal		$3,500 00
Value of real estate		$3,828,904 60
Value of personal		3,500 00
Total		$3,832,404 60

CITY PROPERTY IN USE BY POLICE DEPARTMENT.

219	badges	$150 00	*Amount brought forward*		$2,366 50
87	belts	108 00	3	police signal systems	12,000 00
8	books	26 00	3	patrol wagons	1,000 00
4	bookcases	32 00	93	revolvers	450 00
8	bedsteads	40 00		Ropes and stakes	10 00
	Bedding and blankets	40 00	3	robes, carriage	20 00
1	buggy	200 00	1	rogues' gallery	150 00
8	clocks	25 00	3	saddles and bridles	12 00
2	bureaus	3 00	2	safes	200 00
80	chairs	100 00	95	short billies	42 00
1	carpet	10 00	8	spittoons	2 00
	Letter press and stand	10 00	1	sleigh	25 00
200	copies of police rules	40 00	1	stove	8 00
11	desks	125 00	2	straps and weights	1 00
1	easy chair, matron's	10 00	1	telephone line	300 00
5	horses	500 00	3	thermometers	1 50
6	harnesses	120 00	6	tables	24 00
5	horse blankets	15 00	40	tin dippers	9 00
4	halters	1 00	20	towels	4 00
1	hat rack	50	1	typewriter and desk	140 00
6	ink stands	3 00	2	umbrella stands	2 00
36	lanterns	27 00	1	wagon van, old	25 00
1	lounge	5 00	5	waste baskets	1 00
8	mirrors	14 00	4	water coolers	30 00
3	maps	15 00	1	wardrobe	10 00
10	rugs	20 00	4	water pails	1 00
9	pairs of handcuffs	27 00	2	wagon jacks	2 00
1	police van	300 00		Operating table and chair	37 50
1	ambulance	400 00	3	medicine cabinets	75 00
	Amount carried forward	$2,366 50		Total	$16,948 50

PUBLIC LIBRARY.

REAL AND PERSONAL ESTATE.

141,666 feet of land, as per assessor's books Nov. 30, 1899	$70,000 00	
Library building, as per assessor's books Nov. 30, 1899	116,000 00	
		$186,000 00
Estimated value of books in the library		57,000 00
Estimated value of interior furnishings		9,000 00
		$252,000 00

The lot occupied by the library building is bounded by Broadway, Irving, Cambridge and Trowbridge Streets. The land and buildings were presented to the City of Cambridge by Mr. Frederick H. Rindge in June, 1889, on the completion of the building, which was begun in the autumn of 1887. In 1894 a wing was added to the building at a cost to the City of $20,000 00.

The trustees of the library also hold the following funds, now invested in bonds of the City of Cambridge and deposited with the City Treasurer: —

Fay fund, schoolhouse loan bond, No. 254, due Aug. 1, 1918, 3 1-2 per cent	$1,000 00		
Cummings fund, water loan bond, No. 38, due July 1, 1909, 4 per cent.	2,000 00		
Citizens' subscription fund, invested as follows: —			
Sewer loan bond, No. 7, due May 1, 1910, 4 per cent.	$5,000 00		
Sewer loan bond, No. 47, due Oct. 1, 1925, 4 per cent.	500 00		
		$5,500 00	
			$8,500 00

PUBLIC PROPERTY.

SCHOOLHOUSES.

	Feet of Land.	Purchase of Land.	Erection of Building.	Valuation of Land.	Valuation of Building.	Valuation of Furniture.
Agassiz	19,689	1874	1875	$8,000	$20,000	$1,215
Allston	15,193	1857	1857 1873 remodelled	4,600	30,000	1,795
Boardman	10,018	1866	1868	4,000	13,000	1,290
Bridge	4,646	1836	1836	1,400	500	.....
Corlett	10,000	1880	1880 purchased	1,200	3,000	195
Cushing	14,787	1880	1880 purchased	1,500	3,000	136
Dana	14,317	1847	1848	4,300	2,000	100
Dunster	10,000	1857	1871 remodelled	3,000	3,000	261
Ellis	25,700	1897	1898	6,000	48,000	2,993
Felton	15,090	1847	1848	4,500	6,000	200
Gannett	15,434	1876	1886	3,000	12,000	430
Gannett (old)	27,673	1864	1865	2,600	2 000	395
Wellington		1875	1884	5,700	50,000	2,240
Gore	9,900	1871	1871	4,000	50,000	825
Harvard	20,494	1870	1871 burned 1899 rebuilt	12,000	65,000	3,769
High	74,366	.....	1891	40,900	220,000	9,220
Holmes	11,182	1870	1870	5,000	5,500	275
Lassell	10,000	1880	1880	3,000	8,000	272
Latin	79,579	1894	1897	43,800	225,000	27,150
Lowell	12,033	1883	1883	3 600	5,500	402
Merrill	37,828	1861 1864	1864	19,000	45,000	1,425
Morse	25,650	1889	1890	7,000	73,000	2,040
Otis	8,270	1842 1857 1858	1859 1870 remodelled	4,000	20,000	930
Parker	12,319	.....	1893	7,000	15,000	710
Peabody	21,813	1887	1888 1898 enlarged	9,800	68,000	3,340
Putnam	14,400	1825 1847 1896	1825 removed 1847 torn down 1889 rebuilt	9,800	64,500	2,550
Reed	12,000	1868	1868	1,200	4,000	310
Rindge, M. T.	81,128	.....	1887	44,000	56,000	8,000
Riverside	11,198	1868	1868	3,000	5,000	330
Roberts	16,400	1898	1898	12,000	48,000	3,003
Russell	33,073	1895	1896	6,000	40,000	2,440
Sargent	9,995	1838	1838	5,000	3,000	255
Shepard	14,755	1855	1856 1873 enlarged	11,000	26,000	1,047
Sleeper	21,284	1894	1894	5,000	24,000	1,190
Stearns	10,050	1812	1841 burned 1843 rebuilt	5,000	3,000	322
Tarbell	19,500	1878	1882	4,900	7,000	355
Taylor	23,592	1894	1895	6,000	36,000	1,720
Thorndike	10,027	1860	1860 1875 remodelled	4,000	30,000	1,676
Washington	14,951	1851	1851 1871 remodelled 1878 altered	10,000	25,000	1,830
Webster	25,839	1852 1866 1889	1852 1873 remodelled 1885 enlarged	9,000	50,000	3,550
Willard	20,079	1869	1870	7,000	25,000	1,350
Wyman	14,347	1871	1871 1886 addition	4,500	5,000	555
				$356,300	$1,444,000	$92,091

PUBLIC PROPERTY.

CITY BUILDINGS.

	Feet of Land.	Purchase of Land.	Erection of Building.	Valuation of Land.	Valuation of Building.	Valuation of Furniture.
City Hall.....	47,878	1888	1888	$72,000	$200,000	$29,800
Brattle Sq. Bldg.	16,153	1873	1874	16,000	60,000	2,500
Central Sq. Bldg.	13,028	1872	1873	10,500	50,000	2,436
Station 3.....	4,220	1862	1870	2,100	20,000	800
Ward 5 Bldg....	6,316	1872	1873	3,700	5,300	300
				$104,300	$335,300	$35,836

SCHOOL DEPARTMENT.

PERSONAL PROPERTY.

Text books	$16,177 23	
Desk, reference and library books	1,200 00	
Apparatus in R. M. T. S.	18,803 54	
Apparatus in other schools	4,987 84	
Stock on hand (books, apparatus and supplies)	5,305 70	
		$46,474 31

SEALER OF WEIGHTS AND MEASURES.

PERSONAL PROPERTY.

1 bay horse	$100 00	
1 express wagon	100 00	
1 light wagon	50 00	
1 heavy harness, 1 light harness	25 00	
1 plush robe	1 00	
		$276 00
standard balance		150 00
1 oak cabinet for same		50 00
2 prescription scales, in cases		50 00
2 roll top desks		30 00
1 black walnut table		1 00
5 office chairs		3 00
1 platform scale with brass weights		50 00
1 metric bar, in case		10 00
1 Sealer's trip scale		5 00
1 set standard weights, avoirdupois, iron, 1-50 lb., 1-25 lb., 1-20 lb., 1-10 lb , 1-5 lb.		25 00
2 sets standard weights, brass, 1-8 oz. to 4 lbs.		15 00
2 sets standard dry measures		50 00
2 sets standard wine measures		40 00
Amount carried forward		$755 00

Amount brought forward	$755 00	
1 set standard wine measures (incomplete)	3 00	
1 upright drill	5 00	
1 hand drill	2 00	
1 brass yard measure	2 00	
1 set Troy weights	3 00	
1 set metric weights, 1 gram to 1 kilo .	3 00	
1 extra kilo	1 50	
1 box grain weights, 1-10 grain to 500 grains	10 00	
40-50 lb. weights, for testing hay and coal scales	100 00	
Lot of tools, hammer, wrench, etc., etc.	2 00	
		$886 50

SEWER DEPARTMENT.

REAL ESTATE.

Location.	Buildings.	Erection of Buildings.	Purchase of Land.	Feet of Land.	Estimated Value of Land.	Estimated Value of Buildings.	Total.
Pilgrim Street...	Stable	1887					
" " ...	Sheds.....	1881 1884					
" " ...	House....	1892 1890	1868	23,707	$5,900 00	$4,100 00	$10,000 00

SEWERS.

108,327 miles of sewers, which have cost to date $1,349,277 66

PERSONAL PROPERTY.

4 horses	$600 00	
1 buggy	150 00	
1 Concord wagon	150 00	
2 dump carts	200 00	
1 hose wagon	100 00	
1 express wagon	75 00	
6 sets of harness	180 00	
1 hoisting engine	400 00	
1 pile driver and hammer	100 00	
1 horse roller	75 00	
4 hand pumps	100 00	
Miscellaneous small tools	800 00	
Total		$2,930 00

Real estate	$10,000 00
Sewers	1,349,277 66
Personal property	2,930 00
Total	$1,362,207 66

STREET DEPARTMENT.

REAL ESTATE.

Location.	Buildings.	Erection of Buildings.	Purchase of Land.	Feet or Acres of Land.	Valuation of Land.	Valuation of Buildings.
Raymond St.....	City Yard and Stable, stable, sheds, scales, etc.	1897	1896	7 A.	$11,000	$33,000
Hampshire St...	City Stable, sheds and scales, including old police station.....	1885	...	72,661	30,000	17,000
E. S. Norfolk St.	Yard and pound.....	....	....	39,600	12,000	.....
River St.....	Yard and wharf.	....	....	92,800	32,000	.....
Acton, Mass.....	Land, gravel bank.....	....	1896	32 A.	7,000	.....
					$92,000	$50,000
	Total valuation of Real Estate.....					$142,000

STREET DEPARTMENT.

PERSONAL PROPERTY.

70 horses	$7,000 00	
48 watering carts	12,000 00	
48 carts (30 single, 18 double)	4,800 00	
65 sets of harness	1,625 00	
23 sleds, 2 snow plows, 1 sleigh	1,350 00	
2 snow levellers, 16 gutter plows	340 00	
1 buggy, 4 foremen's wagons	400 00	
3 tool wagons, 1 bicycle	175 00	
2 hay racks, 1 caravan, 2 pungs	275 00	
3 steam road rollers	4,500 00	
1-2 horse section roller	150 00	
4 road machines	800 00	
2 road scrapers	400 00	
5 street sweepers	150 00	
Stone crushing plant, Raymond Street Yard	5,500 00	
Stone crushing plant, Hampshire Street Yard	6,000 00	
Tools and stable furniture	4,000 00	
Lumber, iron, paints, oils, etc.	1,800 00	
212 feet of straight edgestone	60 48	
248 feet of circle edgestone	148 80	
92 linear feet granite flagging	48 93	
37,000 paving blocks	740 00	
30,000 sidewalk bricks	390 00	
35,000 vitrified bricks	980 00	
1,500 tons cracked stone	1,950 00	
Total		$55,583 21
Real estate	$142,000 00	
Personal property	55,583 21	
Total		$197,583 21

WATER WORKS.

Street.	Buildings.	Date of Purchase.	Feet or Acres of Land.	Valuation of Land.	Valuation of Buildings.	Valuation of personal.
Adams Place		1890	160,597	$1,400		
"		1890	419,222	10,000		
S. S. Auburn	1 house & sheds.				$4,000	
" "	Stable (brick)				7,000	
" "	Shop (brick)	1868	(Lot 12) 33,847	6,600	5 500	$24,200
" Concord ave	1 house (brick)					
" "	Shop and stable.		27 33-100 a.	16,700	4,000	325
" "		1890	⅝ a. (gravel pit)	300		
" "		1856	397,417	3,000		
" "		1886	99,000	1,000		
" " nr. Adams street		1891	10,805	500		
S. S. Concord ave		1886	11,220	100		
" " cor. Huron ave.		1892	32,425	700		
S. S. Concord ave		1890	219,400	2,200		
" "		1890	62,000	1,200		
Concord ave		1890	(G. H. lot) 43,560	400		
Near Concord ave. and Railroad		1892	4½ a.	5,000		
S. S. Concord ave		1890	24,100	300		
" "		1889	294,000	3,000		
" " between Fresh Pond and Watertown Branch of F. R. R.		1886	(Tudor Park) 57,312	1,500		
E. S. Cushing		1886	41,053	800		
" " cor. Woodlawn ave., north end		1888	95,482	2,000		
Cushing, corner Woodlawn ave.		1888	639,550	4,000		
E. S. Cushing, cor. Woodlawn ave., south end		1888	(Tri'ngular lot on St.)	No value		
Fresh Pond Lane			211,835	20,000		
" " "		1890	11¼ a.	11,000		
R. Fresh Pond Lane		1886	364,608	3,500		
" " "		1886	239,541	5,000		
Near Fresh Pond Lane and Adams Place		1886	110,891	1,0.0		
Fresh Pond Lane, cor. Huron ave.		1894	46,479	6,900		
Rear of Grove		1886	272,800	2,000		
" " "		1888	150,000	1,500		
" " "		1890	519,000	6,000		
Holworthy		1886	for ext'n St 18,480	No value		
S. S Huron avenue (part lot)		1886	22,348	700		(in G. H.) 15
S. S. Huron avenue (part lot)		1888	91,112	500		
Huron ave		1890	190,500	4,300		
" "		1890	1¾ a.	1,000		
Kingsley Park		1867 1886	309,336	8,000		
Lake View ave., cor. Vassal lane			(Lot 34) 15,371	2,000		
E. S. Lake View avenue			(Lot 32) 12,000	1,200		
E. S. Lake View avenue	House		(Lot 32) 9,000	1,000	7,000	
W. S. Lake View avenue			(Lot 37) 9,180	1,000		
Amts. carried for'd				$137,300	$27,500	$24,540

WATER WORKS—Continued.

Street.	Buildings.	Date of Purchase.	Feet or Acres of Land.	Valuation of Land.	Valuation of Buildings.	Valuation of Personal
Amts. brought for'd.				$137,300	$27,500	$24,540
E. S. Lake View avenue			(Lot 31) 12,000	1,200		
E. S. Lexington ave., cor. Worthington	House and stable..		(Lot 63) 14,437	2,900	7,300	
Massachusetts ave..	In City Hall					offi'e furn $1,000
Reservoir		1865	Reservoir 91,003	27,000		
Vassal Lane			(Lot 33) 10,795	1,000		
E. S. Woodlawn ave.		1886	91,040	2,000		
Woodlawn avenue..		1886	24,096	1,900		
E.S.Woodlawn ave..		1886	107,616	8,000		
N.S.Woodlawn ave..		1887	25,216	1,200		
E.S.Woodlawn ave..		1886	15,735	800		
Woodlawn avenue..		1886	26,989	1,600		
E.S.Woodlawn ave..						
	Woodlawn ave. 9,910 29,471 22,100 4,000 7,000 7,333 14,328 12,280 106,422 Cushing 15,611 11,303 26,914		133,336	13,700		
Worthington	Pumping Station and machin'ry.	1856			50,000	pumping pl't, tools $200,000
	Dwelling-house.	1873	90,414	18,000	2,000	
E. S. Worthington, cor. Lake View avenue		1856 1883	(Lot 36) 5,294	800		
Nursery stock at Fresh Pond						5,000
Total				$217,400	$86,800	$230,540

REAL ESTATE AT HOBBS BROOK.

Value of land	$226,298 30	
Gate houses	6,710 40	
Keeper's house and stable	5,000 00	
Dams	132,297 73	
Personal property	120 00	
		$370,426 43

REAL ESTATE AT PAYSON PARK.

Value of land	$43,650 17	
Tool house	300 00	
Reservoir	287,000 00	
Personal property	30 00	
		$330,980 17

REAL ESTATE AT STONY BROOK.

Value of land	$138,080 73	
Keeper's house and stable	3,000 00	
Dam	289,000 00	
Personal property	50 00	
		$430,130 73
Valuation of : —		
Main pipe	$624,830 00	
Supplies	210,735 00	
Boxes	12,500 00	
Fountains	5,600 00	
Gates	37,500 00	
Hydrants	42,525 00	
Ice water fountains	1,900 00	
Meters	9,285 00	
Standpipes	1,475 00	
Payson Park Line	198,000 00	
Stony Brook Line	237,600 00	
		$1,381,950 00

REPORT OF THE COMMITTEE ON ACCOUNTS

CAMBRIDGE, December, 1902.

To the Honorable, the City Council of the City of Cambridge:—

Agreeably to the requirements of the City Ordinances, the Committee on Accounts for the year 1902, submits its annual report for the financial year ending November 30.

The Committee has met regularly every month for the examination of the books and accounts of the Auditing Department, and it gives them much pleasure to state that they are kept with commendable accuracy and care.

FRED L. BEUNKE,
HERMAN BIRD,
SOLOMON H. BARNARD,
JAMES F. QUINN,
JOSEPH E. SHARKEY,
} *Committee on Accounts.*

REPORT OF THE EXPERT ACCOUNTANT

OFFICE OF GEORGE S. AND HARVEY S. CHASE,
27 State St., Boston, March 28, 1903.

To the Hon. John H. H. McNamee, Mayor, and the City Council of Cambridge, Massachusetts:

GENTLEMEN: — In accordance with the instructions of the Mayor and of a sub-committee of the Council the undersigned has made an examination of the accounting system of the City of Cambridge with especial reference to the "books, accounts and vouchers of the Auditor's Department and of such other departments of said city, in so far as the financial books of such other departments are kept in connection with or have relation to the Auditor's Department," as set forth in an agreement executed by the undersigned and dated January 17, 1903.

As contemplated in that agreement this examination has been made in part by my assistants, and the subsidiary reports attached hereto give a series of descriptions, comments and suggestions upon the workings of and conditions in the several departments as the same appeared at the date of the investigation into each of them.

By the said agreement it is contemplated that "a full type-written report in regard to the results of the investigation, with such suggestions as to improvements in methods of bookkeeping, accounting and other matters as may occur to the examiner" shall be made.

This report is herewith submitted: —

REPORT.

A full statement of our investigations, if it is to be concise as well as comprehensive, must be divided into various headings as follows: —

1. General Accounting System:
   - *a.* Annual financial report.
   - *b.* Auditor's Department.
   - *c.* Treasurer's Department.
   - *d.* Interlocking of the accounting of the other departments with *b* and *c*.
2. Comments upon General Matters.
3. Tables for Comparisons:
   - *e.* Comparison for ten years in Cambridge. Population; valuation; tax rates; debts; etc.

f. Comparison of Cambridge with ten similar cities. Population; net debts; debt per capita.

g. Comparison of Cambridge with ten similar cities. Valuation; net debt; debt per $1,000 of valuation.

h. Comparisons of Cambridge with ten cities. "Running Expenses"; running expense per capita; running expenses per $1,000 of valuation.

i. Comparison for ten years in Cambridge of expenditures for "Running Expenses" (Maintenance and Operation.)

j. Comparison for ten years in Cambridge of expenditures for permanent construction (Capital Outlay.)

k. Comparisons for ten years in Cambridge on a percentage basis. Showing increases of expenditures for maintenance in each year for ten years.

l. Comparisons of 1901, 1902 and 1903 with 1892. Ratios of expenses.

4. Statutes and Ordinances:

m. Present Requirements.

n. Modifications.

5. Department Accounting:

o. Water Department.

p. Street Department.

q. Public Property Department.

r. Assessors' Department.

s. Electric Department.

t. Bridge Department.

u. Park Department.

v. Police Department.

w. Fire Department.

x. School Department.

y. Overseers of Poor Department.

z. Cemetery Department.

It is evident that if we should attempt to set forth the details of our examinations into these and other departments this report would become altogether too volumnious. We have therefore confined ourselves here to brief statements of the general conditions in the departments and refer you to our suggestions for modifications and improvements in the subsidiary reports previously mentioned.

ANNUAL FINANCIAL REPORTS.

The first topic on the list bears this title and to this matter we have given a very considerable portion of our labor and time.

Attached hereto is a copy of the Auditor's annual report for the fiscal year ending November 30, 1902, arranged in an entirely new form according to the schedules of the "Uniform System" of the National Municipal League. For fuller description of the purposes of these schedules we refer you to the opening pages of that report.

We consider this new form to be a marked advance over the arrangement of previous reports not of this city only, but of the reports of every other city in the Commonwealth, and we believe a careful examination of the schedules will fully justify this opinion for the reason that these schedules have been adopted as standards by the National Municipal League only after prolonged discussion and practical application of them to the accounts of many large cities in this country.

The fundamental necessity for efficient and economical administration of any city's affairs is a complete and correct understanding of the present municipal conditions and accounts. This understanding can only be fully had when the arrangement of the financial report is such that the amounts of receipts, appropriations and expenditures of the various departments of a city can be easily and quickly compared with similar figures for previous years in that city and with the corresponding amounts in identical sub-divisions of other similar cities. The practicability of such comparisons is made clearly evident by the schedules included in the new form of the Auditor's report herewith, to which we cannot be too urgent in directing your most careful attention.

UNIFORM PUBLIC REPORTS.

There is now before the legislature of Massachusetts, a bill requiring uniform annual reports from all cities of this State. A similar law has been passed in Ohio, and other similar bills are pending in New York and Illinois, with Michigan and Wisconsin soon to follow.

The new form of your Auditor's report is drawn on the exact lines of the schedules which will be proposed for all cities in Massachusetts as soon as this bill is enacted. It is therefore an important object lesson of the provisions of the Act and the results which will follow from it.

1-b. Auditor's Department.

After a careful study of the ordinances pertaining to the present system of accounting in the Auditor's office, and of the relations between his office and other departments, we have reached conclusions which are set forth in full in our subsidiary report.

In brief these conclusions are as follows: —

We find that the present system of bookkeeping in the Auditor's office is accurate and thorough and that the actual work has been exceed-

ingly well done, but that in many points the system is somewhat cumbrous and can be replaced in considerable part by later and better methods which will be simpler as well as less laborious. Such a system is suggested in our detailed report.

1–c. Treasurer's Department.

Our suggestions in regard to this department, which in brief are much the same as our conclusions in regard to the Auditor's books, are given in full in the subsidiary reports.

We are glad to acknowledge that we have found the treasury department conducted with care, watchfulness and integrity and that the books have been kept with accuracy and in a most excellent manner. The changes which we suggest are required in order to fit the department into its place in the new system.

1–d. Interlocking of the Accounting in other Departments with the Books of the Auditor and Treasurer.

The fundamental importance of this matter in a complete and uniform system of city accounting is evident. We have given it much careful study, the results of which are embodied in the attached reports.

Briefly stated our suggestions require distributions of the vouchers in each department into accounts with the same titles both in the depart ment's books and in the books of the Auditor by means of columnar cash-journals and other suitable methods.

Details not required by the Auditor shall be kept by the department in subsidiary books by sub-divisions of the columnar titles. In this way uniformity will be achieved without sacrifice of the necessary details in the department's books.

2. Comments upon General Matters. Consolidation of Departments, etc. See Subsidiary Reports.

3. Tables of Comparisons.

These tables are attached hereto and labelled E, F, etc.

These tables explain themselves and we direct your attention thereto

Table E gives the population of Cambridge for ten years 1892–1901, and shows an increase of about 26 per cent. in that time. Valuations show an increase of 29 per cent.; Gross debt has increased 106 per cent.; Net debt (sinking funds subtracted) increased 130 per cent.; Net debt (omitting water works debt) increased 140 per cent.; Total net debt per capita increased 82 per cent. and ratio of net debt to valuation increased 77 per cent.

That is to say while population has increased 26 per cent. and wealth (valuations) 29 per cent., the net debt of the city (excluding water debt) has increased 140 per cent, and by table I the total expenditures for ordinary purposes (running expenses) have increased 48½ per cent.; interest charges have increased 55 per cent.; and requirements for sinking funds have also increased 55 per cent.

In table K the percentages of increase in the expenditures of many departments are given and are interesting and instructive. In the order of magnitude these increases are as follows: —

Board of Health, increase 1892 to 1901	493 per cent.
Contingent Account	135 " "
Maintenance of Schoolhouses	70 " "
Inspection of Milk and Vinegar	67 " "
Law Department	64 " "
Schools	64 " "
City Clerk's Department	52 " "
Streets, maintenance	50 " "
Fire Department	49 " "
Public Library	49 " "
Water Works, maintenance	47 " "
Water Works, interest	44 " "
Treasurer's Department	33 " "
Assessors' Department	33 " "
Executive Department	23 " "
Police Department	23 " "
Overseeing of the Poor	21 " "
Stationery and Printing	19 " "
Sealer of Weights and Measures	17 " "
Clerk of Committees	16 " "
Auditor's Department	15 " "
Public Property (excluding schoolhouses)	15 " "
Lamp Department	14 " "
Engineering Department	12 " "

etc., etc.

In table L are given comparisons of expenditures in 1892, 1901, 1902 and 1903 (appropriations) showing the ratios of increase in the later years over 1892.

4. Statutes and Ordinances.

Careful study has been given to these matters with a view to suggestions for changes in the latter in order to authorize the introduction and application of the system of accounting described in our reports.

5. Department Accounting.

These matters have been worked out in very considerable detail and at great length in our subsidiary reports to which each department is respectfully referred.

The principles to which we have adhered throughout are these: that there shall be duplication of accounts in the departments' offices only so far as is necessary to give sufficient check and verification of the Auditor's accounts in detail; that every department's accounts shall so far as possible interlock with the Auditor's accounts; that the departments' accounts shall provide for all details and sub-divisions not required by the Auditor; that the department reports shall set forth all the minor details of receipts and expenditures on the personal side of the accounts and thereby relieve the Auditor's report of these details, and that every department's books and accounts shall be examined and audited in full at least once each year by the Auditor and a report thereof sent to the Mayor.

RECAPITULATION.

Your examiners, acting in an advisory capacity according to instructions, make the following definite suggestions: —

First. Form for Auditor's financial report. We advise that the form of report attached hereto be adopted as the regular form for annual reports hereafter, together with certain modifications of the old forms of tables and with new tables of comparisons on basis of percentage and per capita as set forth in our subsidiary reports.

Second. Bookkeeping in Auditor's Department. We advise that changes be made in the bookkeeping as illustrated in our subsidiary reports, which embrace new arrangement of ledgers with accounts following the Uniform System schedules; new form of cash-journals and other preliminary books; new method for receipts which go to collector; new method for payments of monthly accounts by check-vouchers which shall be drawn by Auditor, executed by Treasurer and paid by the depository banks; new method of requisitions and orders for goods by the departments which shall be duplicated and one copy filed with the Auditor.

Other improvements and modifications as hereinafter set forth.

Third. Treasurer's Department. We advise a check-voucher system for payments, and a re-arrangement of the accounts and books so as to follow the Uniform System.

Fourth. Re-arrangement of department accounts. Street Department, Park Department, Public Building Department, Water Department, etc.

We call attention to our subsidiary reports on each department.

Fifth. We advise the appointment of a Committee of the City Council who shall, in conference with the City Solicitor, draw up amendments and additions to the ordinances for the purpose of authorizing the changes herein comtemplated

Sixth. We advise that a suitable contract be drawn up by the City Solicitor for the purpose of entering into an agreement with the undersigned or some other firm of responsible public accountants for the installation of the Uniform System of accounting as herein described and the supervision thereof.

Very respectfully submitted,

G. S. and H. S. CHASE,

Public Accountants and Auditors.

By Harvey S. Chase.

TABLE E.

COMPARISONS OF POPULATION, DEBTS, ETC., FOR TEN YEARS IN CAMBRIDGE.

	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	Increase in 10 years. per cent.
Population	74,644	77,100	79,600	81,643	84,200	86,800	89,750	90,818	91,886	94,084	
Ratio to 1892	100	103	107	109	113	116	120	122	123	126	26 p.c.
Valuation	$74,355,695	$76,293,989	$77,535,620	$80,911,060	$83,750,095	$86,641,745	$89,551,090	$91,542,795	$94,465,659	$96,216,875	
Ratio to 1892	100	103	104	109	113	117	120	123	127	129	29 p.c.
Tax Rate per $1,000	$16.00	$16.40	$15.80	$15.70	$15.10	$17.50	$16.40	$17.10	$16.90	$16.90	
Gross Debt, City	2,439,000	2,216,000	2,721,000	2,756,000	3,313,000	3,623,500	4,012,400	4,350,400	4,614,400	5,042,400	106 p.c.
Sinking Fund, City	772,280	632,815	628,289	511,817	581,668	714,974	780,362	930,734	1,021,466	1,041,852	
Net Debt, City	1,666,720	1,583,185	2,092,711	2,244,183	2,731,332	2,908,526	3,232,038	3,419,666	3,592,934	4,000,548	140 p.c.
Gross Debt, Water	1,711,500	1,861,500	1,975,500	2,215,500	2,602,600	2,961,600	3,249,100	3,272,100	3,302,100	3,332,100	95 p.c.
Sinking Fund, Water	602,019	686,867	612,085	546,049	369,347	464,138	545,397	665,584	804,327	957,732	
Net Debt, Water	1,109,481	1,174,633	1,363,415	1,669,451	2,233,253	2,497,462	2,703,703	2,606,516	2,497,773	2,374,368	114 p.c.
Total Net Debt	2,776,201	2,757,818	3,456,126	3,913,634	4,964,585	5,405,988	5,935,741	6,026,182	6,090,707	6,374,916	
Ratio to 1892	100	99	103	141	179	191	213	217	219	230	130 p.c.
Total Sinking Fund	1,374,299	1,319,682	1,240,374	1,057,866	951,015	1,179,112	1,325,759	1,596,318	1,825,793	1,999,584	
Net Debt per capita	$37.20	$35.77	$43.40	$47.94	$59.20	$62.25	$66.14	$66.35	$66.29	$67.76	82 p.c.
Ratio of Net Debt to Valuation	3.73 p.c.	3.62 p.c.	4.46 p.c.	4.08 p.c.	5.92 p.c.	6.24 p.c.	6.63 p.c	6.58 p.c.	6.45 p.c.	6.62 p.c.	77 p.c.

TABLE F.

COMPARISONS OF NET DEBTS PER CAPITA OF CAMBRIDGE WITH TEN SIMILAR NEW ENGLAND CITIES.

FISCAL YEAR 1901.

	Population.	Net Debt	Net Debt per Capita.
Providence	178,000	$14,029,846	$78 82
Worcester	121,000	5,553,893	45 90
New Haven	112,000	3,823,594	34 14
Fall River	107,000	3,719,267	34 76
Lowell	94,969	3,108,626	32 73
Hartford	81,619	4,679,042	57 33
Lynn	70,000	3,472,915	49 61
New Bedford	66,000	3,255,347	49 32
Springfield	65,000	2,196,888	33 80
Somerville	63,500	1,761,000	27 73
Average of Ten Cities	95,909	4,560,042	47 55
Cambridge	94,084	6,374,916	67 76

TABLE G.

COMPARISONS OF NET DEBT PER $1,000 OF VALUATIONS.

CAMBRIDGE *vs.* TEN SIMILAR CITIES OF NEW ENGLAND.

1901.

	Valuation.	Net Debt.	Net Debt per $1,000 of Valuation.
Providence	$192,801,860	$14,029,846	$72 77
Worcester	114,278,135	5,553,893	48 60
New Haven	99,502,618	3,823,594	38 43
Fall River	74,554,380	3,719,267	49 89
Lowell	71,674,588	3,108,626	43 37
Hartford	*79,805,088	4,679,042	58 63
Lynn	52,168,015	3,472,915	66 57
New Bedford	64,511,991	3,255,347	50 46
Springfield	74,338,927	2,196,888	29 55
Somerville	53,924,200	1,761,000	32 66
Average of Ten Cities	87,755,980	4,560,042	51 96
Cambridge	96,216,875	6,374,916	66 26

* Valuation on 75 per cent. basis $59,853,816.

TABLE H.

"RUNNING EXPENSES" OF TEN NEW ENGLAND CITIES COMPARED WITH CAMBRIDGE.

1901.

	Running Expenses (Maintenance and Operation).	Running Expenses per Capita.	Running Expenses per $1,000 Valuation.
Providence	*$3,465,201	$19 47	$17 98
Worcester	2,364,259	19 54	20 69
New Haven	1,453,412	12 98	14 61
Fall River	1,613,904	15 08	21 78
Lowell	1,407,470	14 82	19 64
Hartford	1,457,939	17 86	†18 27
Lynn	1,218,846	17 41	23 36
New Bedford	*1,017,982	15 42	15 78
Springfield	1,162,739	17 89	15 64
Somerville	1,036,717	16 33	19 23
Average of Ten Cities	1,619,847	16 89	18 89
Cambridge	2,157,086	22 93	22 42

* Not including street sprinkling. † On basis of 100 per cent. valuation.

TABLE I.

COMPARISONS OF ORDINARY EXPENDITURES (RUNNING EXPENSES) FOR TEN YEARS IN CAMBRIDGE.

DEPARTMENTS.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.
Ambulance	.....	.....	$625 00	$2,269 15	$2,452 39	.....	.....	.....	.....	.....
Assessors	$10,665 86	$10,922 58	10,919 65	12,797 40	12,943 24	$13,077 44	$13,552 25	$13,489 10	$13,498 95	$14,158 06
Auditing	3,167 32	3,245 86	3,378 67	3,352 03	3,567 88	3,511 12	3,489 04	3,470 88	3,571 13	3,649 85
Cemetery	16,791 09	16,749 77	16,464 41	16,999 40	20,000 00	19,846 77	19,832 66	19,910 23	17,924 19	18,150 12
City Clerk	5,996 68	5,978 12	6,229 55	6,404 25	7,107 04	7,193 53	7,759 82	7,875 84	9,042 78	9,113 18
City Messenger	2,518 16	2,525 96	2,587 54	2,645 92	2,763 59	2,799 51	2,859 04	2,555 94	2,562 75	2,599 92
Civil Service	225 00	240 50	224 50	275 00	249 97	248 07	248 85	247 05	249 60	249 80
Clerk of Committees	3,451 52	3,526 06	3,597 37	3,708 47	3,925 34	3,946 56	3,972 39	3,968 90	3,970 47	3,990 73
Contingent Fund	7,212 36	10,847 07	15,348 28	14,514 68	16,139 18	7,966 46	11,064 33	13,099 91	25,944 42	16,940 96
Election Expenses	10,557 49	12,044 88	9,692 50	9,476 60	12,463 99	9,943 08	10,861 47	9,948 85	10,196 56	10,429 95
Engineering	9,902 11	9,644 00	14,499 53	22,743 52	14,211 55	12,969 29	11,147 34	11,224 85	11,187 79	11,050 64
Executive	4,387 95	4,641 04	4,825 08	5,362 15	5,414 08	5,299 35	5,184 26	5,182 28	5,263 48	5,394 49
Fire	61,016 48	61,627 27	72,488 69	82,171 99	85,467 88	78,687 13	80,152 89	84,900 23	90,362 64	91,120 04
Health	4,887 62	5,475 37	6,097 88	11,482 98	16,999 55	17,059 35	17,496 64	19,754 04	27,245 46	28,989 68
Inspection Milk and Vinegar	999 90	1,298 76	1,350 00	1,388 14	1,586 24	1,583 90	1,499 56	1,500 00	1,499 37	1,670 25
Inspection Provisions, etc	.....	.....	756 06	747 89	793 60	796 19	798 12	793 60	798 05	797 45
Inspection Wires	12,548 58	9,545 07	10,148 01	10,399 82	11,999 74	10,699 98	11,197 60	14,499 98	10,575 99	10,499 95
Interest	134,036 63	136,877 92	126,289 20	118,099 84	132,099 07	134,396 40	135,795 18	139,482 86	150,015 96	153,313 03
Lamp Department	63,862 68	66,615 93	68,988 81	69,926 61	67,325 31	69,264 96	69,182 20	71,980 42	71,998 78	72,775 75
Law Department	3,044 37	3,206 19	3,272 94	3,970 45	5,197 44	5,189 88	5,192 65	5,632 35	5,038 59	4,980 89
Overseers of Poor	88,370 89	95,648 75	100,810 42	100.841 33	105,379 81	106,373 80	103,983 80	104,845 15	106,154 82	106,629 67
Parks: Interest on Park Debt	.....	.....	.....	14,060 00	20,580 00	27,800 00	34,570 00	38,880 00	41,900 00	44,880 00
Parks: Maintenance	.....	339 13	7,016 85	8,498 58	8,999 69	11,999 70	12,999 33	14,497 01	21,467 53	23,745 44
Plumbers' Examiners	.....	.....	119 95	153 81	101 05	116 40	111 50	98 75	115 00	115 00
Police	104,547 24	107,736 80	110,244 91	110,784 22	110,111 14	113,550 42	116,762 59	116,998 35	123,774 68	128,458 58
Public Library	13,638 57	14,585 44	14,720 88	16,480 05	18,493 00	19,823 36	20,078 38	21,224 67	20,267 46	20,318 60
Public Property: City Hall, other buildings	24,525 63	24,051 31	27,526 47	26,596 94	33,726 06	33,288 22	27,357 04	24,485 86	25,008 31	28,266 50
Public Property: Schoolhouses	48,129 39	48,973 25	50,428 82	56,420 17	58,537 62	60,483 25	59,929 17	132,775 42	128,298 47	81.512 07
Schools	224,670 38	238,018 21	248,265 10	258,766 08	272,481 50	282,400 45	295,673 51	335,372 89	357.691 51	368,233 67
Sealer Weights and Measures	1,684 10	1,654 93	1,598 95	1,491 29	1,570 52	1,619 73	1,598 46	1,644 02	1,694 97	1,963 73
Sewers	23,664 56	17,279 67	18,058 23	17,307 35	19,641 63	23,283 06	19,307 66	18,179 35	19,755 90	18,928 99
Sinking Fund	365 00	365 00	365 00	365 00	365 00	365 00	365 00	.....	.....	.....
State Aid	25,262 30	25,469 80	24,669 55	23.159 91	23.209 03	23,491 36	28,751 62	27,218 27	25,413 88	25,410 73
Stationery and Printing	2,677 87	2,533 89	2,739 13	2.843 14	2,939 79	2,847 32	2,869 03	2,983 88	3 021 32	3,199 56
Streets (Roads and Bridges)	168,259 71	163,759 47	195,210 22	175,506 01	164,701 99	205,142 55	217,689 22	230,499 52	271,688 86	267,097 30
Treasury	11,680 62	12,179 00	12,542 01	13,471 50	13,995 46	14,415 54	14,282 77	14,699 53	15,478 14	15,596 05
Water Works: Operation and Maintenance	58,563 74	57,103 37	57,389 15	61,346 98	60,268 51	63,703 38	74,099 64	76,005 29	81,198 56	85,885 32
Water Works: Interest	88,165 00	77,925 00	82,405 00	81,615 00	89,225 00	105,134 00	124,854 00	130,674 00	127,179 00	127,109 00
Water Works: Renewal Main Pipe	.....	.....	6,215 78	45,042 66	48,766 24	32,579 46	15,534 91	.....	.....	.....
TAXES. (Payments.)										
Abatements	23,647 67	24.678 10	26,926 07	19,427 40	17,922 54	22,081 73	27,566 98	35,317 61	33,005 90	24,390 38
County	60,845 07	63,569 57	68,110 25	73,887 84	78,321 11	73,887 84	79,914 80	87,085 65	85.997 56	100,429 89
Metropolitan Sewer	6,809 57	17,363 62	45,483 43	61,886 21	.....	137,297 30	56,818 94	74,763 08	73,018 92	72,344 93
National Bank	7,459 69	6,659 26	7,372 24	7,136 92	6,632 77	7,995 91	7,459 91	7,681 26	7,167 54	6,935 25
State	54,495 00	77,850 00	62,280 00	46,800 00	54,600 00	54,600 00	48,195 00	48,195 00	48,195 00	55,790 00
Totals	$1,392,733 80	$1,442,755 92	$1,548,282 08	$1,622,624 68	$1,633,276 54	$1,828,758 75	$1,802,059 55	$1,973,592 47	$2,078,440 29	$2,067,114 90

TABLE J.

COMPARISONS OF EXTRAORDINARY EXPENDITURES FOR TEN YEARS IN CAMBRIDGE.

DEPARTMENTS.	1892	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	Total Ten Years.	1902.
Ambulance												
Assessors												
Auditing		$200 00	$605 00								$805 00	
Cemetery		2,712 82	1,534 48						$3,679 15	$2,265 12	10,191 57	$1,055 52
City Clerk												
City Messenger												
Civil Service												
Clerk of Committees												
Contingent												
Election Expenses												
Engineering			779 97								779 97	
Executive												
Fire												
Health										10,000 00	10,000 00	
Inspection Milk and Vinegar												
Inspection Provisions												
Inspection Wires												
Interest												
Lamp Department												
Law Department												
Overseers of Poor		1,921 42									1,921 42	
Parks (Sinking Fund)				$7,200 00	$8,450 00	$12,500 00	$14,375 00	$16,250 00	17,500 00	21,208 33	97,483 33	22,541 67
Parks (Construction)			251,259 24	192,716 47	218,460 74	159,484 20	155,244 56	105,438 81	84,988 52	136,270 29	1,303,862 83	55,528 94
Plumbers' Examiners												
Police		3,845 00									3,845 00	
Public Library			15,154 74	4,584 78						303 40	20,042 92	28,337 22
Public Property	$13,366 44	46,552 28	44,941 50	24,105 24	35,116 53			700 00			164,781 99	395 00
Pub. Prop. (School-houses)	92,303 46	29,703 77	65,025 78	47,167 54	48,884 10	128,445 09	171,342 72	174,542 13	14,550 55	92,171 37	864,136 51	33,492 00
Metropolitan Sewer Construction			58,389 85	32,937 99	12,140 50						103,468 34	
Sewers	18,659 93	23,317 37	16,187 35	37,308 25	74,906 14	40,948 39	33,521 24	66,816 93	88,825 21	86,286 72	486,777 53	69,506 99
Sinking Fund	91,405 00	103,730 00	100,025 00	106,375 00	93,400 00	104,360 00	111,572 50	118,750 00	133,824 00	137,643 50	1,101,285 00	136,300 16
State Aid												
Stationery and Printing												
Streets (Roads and Bridges)	142,688 95	79,273 16	90,138 32	84,447 36	159,210 87	207,843 63	31,478 31	96,138 32	101,394 24	242,496 08	1,235,109 24	321,880 04
Treasury												
Water Works (Construction)	260,825 10	235,460 58	190 143 50	496,688 92	766,039 32	497,204 87	316,438 45	46,651 09	20,140 50	32,198 71	2,861,791 04	32,943 59
Water Works (Sinking Fund)	90,218 94	60,357 17	84,535 04	73,361 25	81,230 69	95,558 27	103,656 00	113,718 50	125,090 12	122,352 80	950,077 78	123,000 29
TAXES.												
Abatements												
County												
Metropolitan Sewer												
National Bank												
State												
Totals	$709,467 82	$587,073 57	$918,719 77	$1,107,092 80	$1,497,838,89	$1,246,344 45	$937,628 78	$739,005 78	$589,991 29	$883,196 32	$9,216,359 47	$824,981 42

TABLE K.

COMPARISONS OF ORDINARY EXPENDITURES FOR TEN YEARS IN CAMBRIDGE, IN PERCENTAGES.

DEPARTMENTS.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.
Ambulance (Irregular)										
Assessors	100	102	102	120	121	123	127	126	127	133
Auditing	100	102	107	106	113	111	110	110	113	115
Cemetery	100	100	98	101	119	118	118	118	107	108
City Clerk	100	100	104	107	119	120	129	131	151	152
City Messenger	100	100	103	105	110	111	114	102	102	103
Civil Service	100	107	100	122	111	110	111	109	111	111
Clerk of Committees	100	102	104	107	114	114	115	115	115	116
Contingent	100	150	213	201	224	110	153	182	360	235
Election Expenses	100	114	92	90	118	94	103	94	97	99
Engineering	100	97	146	229	144	131	112	113	113	112
Executive	100	106	110	122	123	121	118	118	120	123
Fire	100	101	119	135	140	129	131	139	148	149
Health	100	112	125	235	348	349	358	404	557	593
Inspection Milk and Vinegar	100	130	135	139	159	158	150	150	150	167
‡Inspection Provisions			100	99						
Inspection Wires	100	76	81	83	96	85	89	116	84	84
Interest (not including Parks and Water)	100	102	94	88	99	100	113	104	112	114
Lamp Department	100	104	108	109	105	109	109	113	113	114
Law Department	100	105	107	130	171	170	171	185	166	164
Overseers of Poor	100	108	114	114	119	120	118	119	120	121
*Parks (Interest)										
†Parks (Maintenance)										
Plumbers' Examiners (Irregular)										
Police	100	103	105	106	105	109	112	112	118	123
Public Library	100	107	108	121	136	145	147	156	149	149
Public Property	100	98	112	109	138	136	112	99	102	115
Public Property (Schoolhouses)	100	102	105	117	122	126	125	276	267	170
Schools	100	106	110	115	121	125	132	149	159	164
Sealer of Weights and Measures	100	98	95	88	93	96	95	98	101	117
Sewers	100	73	76	73	83	98	81	77	84	80
Sinking Fund (See "Extraordinary")	100									
State Aid	100	101	98	92	92	93	114	108	101	101
Stationery and Printing	100	95	102	106	110	106	107	111	113	119
Streets, Roads and Bridges	100	97	116	104	92	175	122	129	153	150
Treasury	100	104	107	115	120	123	122	126	132	133
Water Works (Maintenance)	100	97	98	105	103	109	127	130	139	147
Water Works (Interest)	100	88	93	92	101	119	142	148	144	144
TAXES. (Payments.)										
Abatements	100	104	114	82	76	93	116	141	140	103
County	100	104	112	121	129	121	131	143	141	165
Metropolitan Sewer	100	255	668	909		2,016	834	1,098	1,072	1,062
National Bank	100	89	99	96	89	107	100	103	96	93
State	100	143	114	86	100	100	85	88	88	102

* Expenditures in 1895, 100 per cent.; in 1901, 319 per cent. † Expenditures in 1895, 100 per cent.; in 1901, 278 per cent. ‡ About 106 per cent. on average.

TABLE L.

EXPENDITURES OF VARIOUS DEPARTMENTS IN 1901 AS COMPARED WITH THOSE OF 1902, AND WITH THE APPROPRIATIONS FOR 1903.

	1901 Expenditures Ratio to 1892.	1902 Expenditures Ratio to 1892.	1903 Appropriations Ratio to 1892.
Assessors	133	126	
Auditing	115	119	
Cemetery	108	104	
City Clerk	152	126	
City Messenger	103	129	
Civil Service	111	111	
Clerk of Committees	116	116	
Contingent	235	184	
Election Expenses	99	120	
Engineering	112	104	
Executive	123	123	
Fire Department	149	154	
Health Department	593	1,513	
Inspection of Milk and Vinegar	167	167	
Interest	114	123	
Lamp Department	114	116	
Law Department	164	165	
Overseers of Poor	121	105	
†Parks, Interest	319	355	
‡Parks, Maintenance	278	317	
Police	123	125	
Public Library	149	142	
Public Property	115	100	
Public Property (School Houses)	170	135	
Sealer of Weights and Measures	117	165	
Sewers	80	74	
State Aid	101	101	
Stationery and Printing	119	*	
Streets (Roads and Bridges)	150	136	
Schools	164	166	
Treasury	133	132	
Water Works, Maintenance	147	138	
Water Works, Interest	144	147	

Total Appropriations Bill not passed up to March 28th.

* Distributed to various departments in 1902.
† Compared with 1895.
‡ Compared with 1895.

SUBSIDIARY REPORT

To the Mayor and City Council of Cambridge, by Harvey S. Chase and Chauncey B. Allen, Assistant, Public Accountants and Auditors.

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1. GENERAL ACCOUNTING METHODS.

As a part of the present examination of the affairs of the City of Cambridge a general survey has been made of the methods of accounting in use by the various departments in the City, in the course of which all the books and methods in the principal departments have been examined in detail and the requirements carefully studied with a view to suggesting such modifications and improvements as are necessary to establish a uniform and comprehensive system of accounting for all departments of the City.

In reference to the methods now in use in the various departments so far as they relate to accounting for receipts and expenditures it may be said that although considerable care has been exercised in many departments in developing systems of bookkeeping which will furnish the data necessary for each department's particular requirements, yet the final result has been, that the departments when viewed as component parts of a system, now possess a series of disconnected methods of accounting which are entirely independent of each other and which are carried on without reference to harmonizing with the Auditor's accounts except so far as totals are concerned. This unsystematic manner of carrying on accounts has had the effect of producing duplications to a very considerable extent in some directions while providing only insufficient data and incomplete records in others.

The central accounting authority in Cambridge is vested by ordinance in a Committee of Accounts, which is a joint committee of the City Council consisting of two members from the Board of Aldermen and three from the Common Council.

By the terms of the City ordinance it is a part of the duty of this Committee to direct the manner in which all accounts of the City shall be kept. The difficulty of directing the details of accounting methods through a committee of this sort is sufficiently obvious to give emphasis to the necessity of a single accounting authority in the City, naturally the City Auditor, who is necessarily the chief accountant of the City and

is the authority to whom reference is made by all branches of the City government whenever questions arise relating to the financial condition of the City.

In suggesting improvements in accounting methods the view which we have taken is not that the departments form series of separate and disconnected offices each doing a distinct business on its own account, but on the contrary we look at the City as a whole as if it were one large corporation with several branches. From this point of view it is evident that the only satisfactory method of accounting is one which will provide a system of general books and accounts in the central office (the Auditor's) and will provide in the branches — department offices — similar sets of books which will interlock with those of the central office and in which the department books should carry the accounts into much greater detail than is possible in the general books at the Auditor's office.

For installing this method in Cambridge the following books are proposed :—

First. Auditor's office :

Ledgers — "A" ledger for Appropriation Accounts.

"B" ledger for Assets and Liabilities Accounts.

"A" accounts being those pertaining only to the current fiscal year, viz : ordinary revenues and running expenses, while "B" accounts are the permanent or continuing accounts with balances carrying over from previous years and to following years.

Journals — These books should be columnar cash-journals, so-called. Separate books for receipts and for expenditures. These books should be made up of sheets which are numbered and used in regular order and then locked into a "loose leaf" book. Each sheet or leaf of these journals should be self proving — the total of one gross column being equal to the sum of the totals of all the other columns — and at the end of the month the totals of the columns are posted to the ledgers, each column having a title which corresponds to a page of the ledger. These titles represent appropriations or sub-divisions of appropriations as necessary.

The columnar cash-journals should be used for entering receipts and expenditures, distributing them under proper headings and from these columns postings will be made to the ledgers.

For expenditures the distribution in the cash-journal should be under headings sufficiently general in terms to make it possible for the expenditures of each department to be distributed under them with but few variations. These general headings would be further analyzed and distributed in subsidiary books or columns in as much detail as desired.

In each department there should be kept a columnar cash-journal for entering expenditures under headings uniform in classification with

those of the Auditor's office. The total expenditures relating to each appropriation should be posted to a small ledger in which accounts shall be kept with the various sub-divisions of the appropriations. The general classifications in the department cash-journals as in the Auditor's books, may be further analyzed in as much detail as desired. Revenue accounts should follow a uniform general scheme also. Bills in standard form with stubs for use of Auditor and Treasurer should be made out in the department in which the charge originates and forwarded to the Auditor for recording in his office after which they should be passed on to the Collector (Treasurer) for collection.

In the case of large numbers of bills like taxes, water rates, etc., it is sufficient to pass the bills directly to the Collector as is now done, sending the Auditor adequate notice in regard to them, but where the number of bills is not too great they should pass through the Auditor's hands before collection.

All of the above relates to the accounting for receipts and expenditures of the offices as related to appropriations. There will also be necessary in every department a considerable variety of subsidiary books, card systems, etc.

In certain departments these matters have been already developed to a considerable extent but in others there is a lack of properly classified records so arranged that the head of the department may always have at hand properly classified information in regard to the functions discharged by his department. This sort of information is necessary for the present head of any city office and also it is desirable that a full and complete record in easily comprehended form may exist for the benefit of succeeding officers.

It has frequently been the case that with the death or removal of an official, all information necessary to the effective carrying on of the office has been lost for the reason that it has been carried along in the mind of the officer only, instead of having been recorded properly in books. As an illustration of this matter the public buildings department may be cited. Here but scant records exist in regard to the operations of the department and those in existence are not of much value. A card system properly devised and carried out would be of great value in this department as it would provide the superintendent with necessary information which could be easily referred to and would constitute a comprehensive record for others. The practical demonstration of the value of such a system can easily be seen in the office of the City Electrician who has a card system relating to his department which is well devised and efficiently carried out, and which provides a concise and valuable record of the City's business so far as it is controlled by the electrical department.

Such a systematizing of department records is not only necessary for the proper conduct of the City's business but in certain cases may serve the ends of economy not a little. The Assessors' office may be cited here. At present it is the custom each year previous to May 1st to write up "street books" so-called which contain a complete list of taxes. These books are taken upon the street by assistant assessors and additions and amendments entered. When thus amended and returned these books are copied in full into a new set of books exactly like the street books, for use in the office. From these in turn a third set of books in full is written up and placed on shelves in the Assessors' office for the use of the puplic. In addition to these, other books are made up for real estate taxes only.

It is entirely feasible to use for the purpose for which street and office books are now annually written up, a set of cards of proper size, shape and color, which may be kept in drawers in the office for reference during the greater part of the year and taken out, placed in binders, and carried out on the street at the time of assessing. These cards can be so arranged that if used with reasonable care they will last through a series of years and thus avoid a great deal of duplication and copying. Cards of different colors can be used for real estate, personal and poll taxes, and the use of proper guide cards will make the whole easy of reference. This labor saving idea is already illustrated in the Cambridge Water Department, where meter readings are handled on cards in just this fashion.

It appears to be the fact that the assessing of real estate has in the past been done somewhat unsystematically, and this fact points to the marked advantage which would ensure from a list upon a card system, or otherwise, of all the real estate in the City classified by streets, and so arranged as to show the assessed value of each parcel of real estate in the City beginning at a given point of time. In succeeding years the modifications of that valuation and reasons therefore should be added.

In recapitulation, the foregoing recommendations in regard to accounting may be arranged under two heads: —

First. For receipts and expenditures a uniform system for all departments in harmony with and forming a part of the system of accounting of the Auditor's office, which becomes the central authority in regard to the financial accounting of the City.

Second. For the office and technical records of each department such subsidiary books, card systems, etc., as will provide at all times full and easily comprehended information in regard to all the operations of the department.

As before stated, much intelligent work has been done in many departments in the direction of providing suitable accounting and records.

and in such cases modification and revision at most will only be necessary, but where such effort has been lacking the need should be promptly supplied on the lines suggested above.

Capital and Property Accounts.

By the provisions of Section 28 of Chapter 28 of the revised ordinances it is a part of the duty of heads of departments to report the value of City property in their hands at the close of the year and for certain departments to report the value of real estate and buildings. This has been done to some extent, though the figures last published by departments for personal property are two years old.

The carrying of Capital and Property accounts on the books of the City, however, is one of the features in the method of accounting recommended, and is a radical departure from past methods. An important feature of the Auditor's report for 1902, as arranged upon the "uniform" schedules is the balance sheet of the City as it appears in "B" schedules. As a matter of fact the information contained in these schedules must, under the conditions which now exist in most cities, be obtained from several sources and pieced together to form a complete balance sheet. Obviously a balance sheet should not be made up in this way but should be a transcript of balances of accounts all of which are to be found on the general books.

In the case of municipal industries like water works, etc., it is very important that the Capital accounts should be incorporated in the accounting so that, as in the case of private enterprises, the books may present a complete statement of the assets and liabilities of the industry and the capital invested by the City therein.

Auditing Department.

The books and accounts of this department have been kept in most thorough and excellent manner, and in such a way as to cover the most minute details of the financial transactions of every department.

Bills and pay rolls from all departments, after careful scrutiny, are entered by name and amount in draft books, from which a summary journal entry is made in the "department journal." From this journal postings are made to appropriation accounts in the "department ledger," these appropriation accounts having been opened with a credit at the time appropriations were made by the City Council. The draft books are examined and approved monthly by the Committee on Accounts. The

Department Ledger shows the expenditures of all the departments month by month, and the balances of appropriations remaining. Expenditures are analyzed and distributed under various classifications upon a series of analysis sheets provided for that purpose. These sheets are ruled with a column for each month of the year, and the classifications are carried down the side of the sheet, sufficient space being allowed to comprehend all items during the year.

The foregoing books and forms are used solely for the purpose of accounting for expenditures under the various appropriations. The main accounts of the City are kept in a "City Ledger," so called, which is posted from a "City Journal," in which entries covering the main transactions are entered in the usual form.

Revenue items are entered in a Revenue book, journalized and posted to the credit of accounts bearing the name of the departments in which the items originate. For the items coming from most of the departments a "wrapper" is made out and sent with the bills to the Treasurer, and when bills are collected the "wrapper" is returned to the Auditor. For departments not using this "wrapper" system a book is used in which items are entered and the books themselves are sent to the Treasurer with the bills. When payment is received an entry is made in these books by the Treasurer, and the book is returned.

Monthly settlement of accounts against the City is made in the following manner: —

Pay rolls are forwarded to the Treasurer and employees either call at the office and receive pay, or the amounts due are taken out by Paymaster and distributed.

Persons having bills against the City call at the office of the Auditor and if the bills in question have been duly approved for payment the parties after receipting their bills, receive Auditor's checks upon the Treasurer which are paid in the Treasury Department without further acknowledgement by the creditor. For accounts remaining uncollected in the Auditor's office a notice is sent saying that bill is ready for payment and if draft is made upon the Auditor it will be honored, and many accounts are settled in this way. Receipted bills, numbered consecutively are kept in document files in the vault of the Auditing Department and from these an index is made up by name and number.

Subsidiary books and cards are kept for registry of bonds, interest due, revenue accounts uncollected, etc.

From the data recorded in the manner described above the Auditor's annual report is made up showing all receipts and expenditures, the latter items being reported in much detail even down to the names of persons supplying each particular kind of merchandise.

Suggestions.

In remarks upon general accounting methods the modifications in accounting suggested for this department have already been described at same length. The interest of that method in addition to forming the base for a uniform system of accounting throughout the City offices, is by means of the columnar cash-journal to simplify the processes now in use in recording receipts and expenditures and by the introduction of capital accounts into the general ledger to present upon the books of the City a more complete and comprehensive statement of its affairs. It is also the intent of this scheme to relieve the Auditor's books and reports of much of the minute detail now included in them which should more properly be recorded and reported by the various departments. As matters now stand a great deal of detail included in the Auditor's report is also set forth at a great length but in different form in the department reports.

Under the provisions of the system suggested herein the Auditor would report the expenditures of each department classified under general headings applicable to all departments and these general classifications would be taken up and further analyzed and classified as much in detail as desired in the department reports. The result of these modifications would be to effect a considerable saving in time and expense of compilation and publication of the annual reports as well as a noteworthy reduction of the bulk of the City documents. This will be attained through the elimination of what are in fact duplications of large numbers of items and statements. At the same time nothing valuable would be lost from the City document for all the information as at present published would still be included although in more concise and coherent form.

It has already been stated that in the future the Auditor's report should be presented in the form of the uniform schedules of the National Municipal League and that the accounts in the books should be laid out upon the same lines.

Payments.

The present method of paying bills entails upon the Auditor a great deal of work at the counter which is of little value to the City and diverts his time and attention from other matters which are relatively of more importance. The method of payment of bills only by cash over the counter or by drafts against the Auditor causes frequent delays in settlements and considerable complaint is made in regard to bank charges upon drafts. In private enterprises and in many cities it is the approved practice to pay accounts immediately by checks so far as possible. We urge this practice as evidently a proper one to be adopted by the City of

Cambridge. At present the Treasurer requires all paid checks to be filed in his office and at the same time the Auditor requires a proper voucher to be filed with the original voucher bill in his office. Therefore we advise a combination check — voucher in the form shown in our attached appendix. In this the voucher is attached and forms a part of the check and the latter is not negotiable unless the voucher portion is properly signed by the party in whose favor the check is drawn.

When these check-vouchers are received from the banks the vouchers are detached from the checks turned into the Auditor's office to be filed with the bills, while the checks themselves remain in the Treasurer's office as his vouchers for the cash payments. All monthly bills except amounts which can be more easily handled over the counter in the present way should thus be paid by check-vouchers which should be made up and sent out on same day of each month.

Treasury Department.

The Treasurer of the City of Cambridge is also City Collector and therefore the accounting in his office covers both receipts and expenditures.

After bills for taxes, water rates, assessments and other items having been sent in to the Collector's office by the departments for collection, notices are sent out by the Collector to the individuals from whom the various amounts are due. The original bills are however retained in the office of the Collector until paid. Small cash books are kept covering the various classes of bills to be collected and when bills are paid entry is made in the proper book from stubs which are detached from the bills. The totals of these cash books are in time entered in summarized form in a cash-journal from which postings are made to the ledger. Expenditures are in turn summarized in the cash-journal and posted to the debit of appropriation accounts to which they belong.

As a part of the present investigation an examination was made of the Treasurers' cash on January 3, 1903, and a report of this examination is as follows:—

Collections per debit of Cash-Journal		$328,086 60
Payments per credit of Cash-Journal		215,137 95
		$112,948 65
Add Water Works item in suspense		1,000 00
Balance to be accounted for		$113,948 65
Office Cash:		
Checks	$123 11	
Coupons not entered	230 00	
Bills and specie	6,472 25	
	$6,825 36	
Balance First National Bank	101,052 98	
Balance Lechmere National Bank	1,254 96	
Balance Cambridge Trust Company	4,815 35	
		$113,948 65

Bank balances were verified and reconciled with statements from the banks as follows :—

FIRST NATIONAL BANK.

Balance per check book Jan. 31, 1903	$101,052 98
Checks outstanding (32)	31,760 27
Balance per bank statement Jan. 31, 1903	132,813 25

LECHMERE NATIONAL BANK.

Balance per check book Jan. 31, 1903	$1,254 96
Balance per bank statement Feb. 2, 1903	1,254 96

CAMBRIDGE TRUST COMPANY.

Balance per check book Jan. 31, 1903	$4,815 35
Interest on deposits	44 00
Balance per bank statement Jan. 31, 1903	4,859 35

SUGGESTIONS.

A desirable feature which should be added to the Treasurer's accounts is the separation of taxes collected into "Real Estate," "Personal," and "Polls," and such separation is also necessary in order to report these items upon the Uniform schedules hereafter to be required as above described.

2. COMMENTS UPON GENERAL MATTERS.

CONSOLIDATION OF TWO OR MORE DEPARTMENTS IN ONE.

This was the question which was being considered by the joint committee appointed last year from both branches of the City Council and which led to the authorization of the present examination.

The present examiners have, however, gone much further and in lines quite different from those suggested by the original question, as is fully shown by the present report which is already too voluminous.

Your examiners, in the time at their disposal, have not been able to fully satisfy themselves upon this important question and at the same time prepare the equally if not more important comments and suggestions herein set forth. We have therefore laid over the above question until the time when a further examination and report shall be authorized.

PARKS.

A very considerable factor in Cambridge expenses and one to be reckoned with in considering the tax rate is the park system of the City. Expenditures on this account began in 1893 with a small amount and since that time have continued at the rate of about $200,000 per annum

for construction and maintenance. The expenditures for construction have been provided for out of loans which necessitate of course annual payments out of ordinary income for interest and sinking funds.

In 1902 the expense for maintenance, interest and sinking funds was as follows : —

Maintenance	$26,942 07
Interest	49,880 00
Sinking Funds	22,541 67
	$99,363 74

The total ordinary expenditures of the City for that year were $2,449,487.79 of which the above expenditures amount to 4 per cent. or, if we add to the above expenditures the Metropolitan Park Tax of $96,478.96, to about 8 per cent. Based on the City's valuation Nov. 30, 1902, ($97,273,334) the expenditures for Park maintenance exclusive of Metropolitan Park Tax equal a tax rate of $1.02 per $1,000.

Including the Metropolitan Park Tax the total maintenance and expenditures equal a tax rate of $2.01 per $1,000. These figures are of course modified to some extent on account of whatever increase of valuations has occurred by reason of improvements.

As a business proposition it is maintained that the parkway along the river front will redeem lands formerly of little value and by making them desirable building lots will add in the course of time a sufficient amount to the valuation of the City so that the return therefrom in the shape of additional taxes year by year will reimburse the City for the heavy outlay on this account. This is evidently reasonable and the improvement is most desirable but for the present the effect of the construction and maintenance of the park system is to increase the tax rate appreciably as shown above.

Assessed Valuations.

An examination of the rate of assessment noted on the plans in the Assessors' office confirms the general impression that these rates are unequal and made without apparent system. The recommendation that these valuations be carefully revised appears to us to be important. In addition to this revision however it will be necessary when these valuations have once been established upon a fair and equitable basis that an adequate system shall be established for recording this revised assessment as well as whatever changes occur in subsequent years. We have referred in a general way in our remarks upon accounting methods to a plan which would provide for a complete and consecutive record of the

valuations which are placed upon each parcel of land in the City with proper explanation of the basis upon which increases or decreases have been allowed.

Abatements.

It has been the practice in late years to make an appropriation covering abatement of taxes but this is evidently an incorrect method of handling this matter for the reason that appropriations from tax levies are supposed to be made to cover the running expenses of the City and from loans for new construction.

When the budget has been made up and the amount required to be raised by taxation has been ascertained, it becomes the duty of the Assessors to compute such a tax levy as will yield this amount of money into the treasury. If, as is definitely known from past experience, a certain amount of the total taxes levied will on the average be abated, it becomes necessary of course to provide for this loss by adding such an "overlay" to the actual requirements as will make up for these abatements. This overlay can then be carried on the books of the City as a reserve account to which charges can be made as abatements are made, thus disposing in a correct manner of the question, which is at present somewhat vexatious, as to what account or in what manner to charge off the balances of these old tax levies.

An examination of some of these uncollectible tax balances shows that they consist in a very large degree of poll taxes. For example, the balance of 1896 taxes, recently abated, amounted to $18,927.97; of this amount $16,177.85 consisted of poll taxes, the remainder being of course personal property taxes.

New Cambridge Bridge.

The expenditures to November 30, 1902, on account of the new Cambridge Bridge, have been as follows: —

	Total Expenditures Including Salaries, etc.	Salaries Only.
1898	$4,535 41	$1,298 63
1899	44,681 73	6,618 65
1900	57,652 84	8,124 01
1901	188,986 03	11,789 12
1902	202,095 67	12,423 70
	$497,951 68	$40,254 11

$40,254.11=8 8-10 per cent. of $497,951.68

It is estimated that it will be two years more before the bridge is opened to the public, and probably some time longer than that before it is fully completed.

Salaries of Heads of Departments.

	1902.	Five Years Ago. 1897.	Ten Years Ago. 1892.
Mayor	$3,500 00	$3,500 00	$3,500 00
City Solicitor	3,500 00	3,500 00	2,500 00
Superintendent of Schools	3,500 00	3,000 00	3,000 00
Treasurer	3,000 00	3,000 00	3,000 00
City Clerk	3,000 00	3,000 00	3,000 00
Engineer	3,000 00	3,000 00	3,000 00
Medical Inspector	3,000 00	3,000 00	1,500 00
Librarian	2,700 00	2,091 67	1,000 00
Clerk of Committees	2,400 00	2,400 00	2,400 00
Water Registrar	2,400 00	2,200 00	2,100 00
Supt. of Water Works	2,340 00	1,000 00	2,362 50
Auditor	2,100 00	2,100 00	2,100 00
School Agent	2,100 00	2,000 00	1,700 00
Superintendent of Sewers	2,000 00	2,000 00	1,700 00
Chief of Fire Department	2,000 00	1,800 00	1,583 30
Supt. of Public Buildings	2,000 00	1,979 17	1,749 96
Chief of Police	2,000 00	1,800 00	1,769 10
Superintendent of Streets	2,000 00	2,000 00	1,949 96
Principal Assessors, three, at	2,000 00	2,000 00	1,583 32
City Electrician	2,000 00	2,000 00	1,744 93
Superintendent of Parks	2,000 00		
City Messenger	1,800 00	1,800 00	1,800 00
Superintendent of Cemetery	1,600 00	1,600 00	1,300 00
Secretary of Overseers of Poor	1,500 00	1,500 00	1,500 00
Agent of Overseers of Poor	1,200 00		
Sealer of Weights and Measures	1,000 00	1,000 00	896 81
Inspector of Milk and Vinegar	900 00	900 00	600 00
Bridge Commissioner	800 00	800 00	500 00
Inspector of Animals	700 00	700 00	
Registrars of Voters, three, at	500 00	500 00	500 00

3. TABLES FOR COMPARISONS.

These are given in full and commented upon in our principal report.

4. STATUTES AND ORDINANCES (m and n).

These matters can only be satisfactorily handled by a committee of the Council with whom we shall be pleased to confer when so instructed.

5. DEPARTMENT ACCOUNTING.

o. Water Department.
p. Street Department.
q. Public Property Department.
r. Assessors' Department.
s. Electric Department.
t. Bridge Department.
u. Park Department.
v. Police Department.
w. Fire Department.
x. School Department.
y. Overseers of Poor Department.
z. Cemetery Department.

Water Department. (O).

The Water Department of the City of Cambridge is governed by a Board of five members who received no salary. The executive officers are the Superintendent, in charge of the Water Works in general, and the Water Registrar, whose duties are to look after matters relating to water rates. The latter is also Clerk of the Water Board. The employees of the Water Department may be classified in the following manner.

Registrar's office: —
- Registrar's assistant.
- General utility clerk.
- Stenographer.
- Two Inspectors.

Superintendent's office: —
- Assistant Superintendent.
- Clerk.

Pumping: —
- Chief Engineer.
- Assistant Engineer.
- Two firemen.
- Machinist.
- Night watchman.
- Wiper.
- General utility man.

General: —
- Foreman.
- Foreman of supply work.
- Foreman of main pipe laying.
- Plumber in Meter Department.
- Five pipe jointers.
- Sealer.
- Three keepers of reservoirs.
- Two keepers of yards and shops.
- Watchman at Fresh Pond.
- Four teamsters.
- Laborers: —
  - four to five in winter
  - thirty to thirty-five in summer

The bookkeeping of the Water Department is divided into two distinct and separate divisions, the general accounts of the water works kept in the Superintendent's office, and the water rate accounts kept by the Registrar.

Registrar's Accounts.

Annual Rates.

Inspectors books for annual rates are made up annually for use on the street and contain full information as to owners, use of water and kind of fixtures *i. e.*, names are written in before books go out and other information is filled in by Inspectors. This same information is posted from these books to ledgers arranged alphabetically as to streets and from these ledgers bills for annual rates are made out. Space is provided opposite each account on the ledger to note settlement either by payment or by shutting off the water. Bills made out from accounts on this ledger are sent to the treasurer for collection, he reporting collections on a small book which is sent in daily to the water office for posting on ledgers. An additional ledger is kept in the same manner for fractional accounts *i. e.*, accounts for part of a year.

Meter Rates.

A card index of meters is kept showing name of party, location, etc., etc. Cards for periodical readings are arranged for two years use, and at time of taking readings are removed from the file, placed in binders and used by Inspectors instead of writing up street books as in the case of annual rates. Accounts are made up directly from these cards to the meter ledger which is arranged with a series of columns for entering various items of information and space is provided for several accounts on each page. Bills are made out for meter rates from this ledger and follows the same course as those for annual rates.

Supplies and Repairs.

Applications for supplies are made by owners, and the charge is made up on a ledger similar in form to those for annual rates, only with less columns.

Subsidiary Books, Etc.

Small books for recording off and on and seals.
Record of fees for off and on.
Complete card index of papers, meters by streets and records.
Application for service with plan and index.

Abatements and Refunds.

Refunds made are largely for hose not used for which it is necessary to accept the occupant's statement. Refunds are also made for rates paid

for unexpired time, *i. e.*, an owner pays an annual rate in full and premises are vacated before the time is up. Water is then shut off and a refund is made pro rata.

Abatements are allowed for hose charges upon the statement by an owner that he will not use the hose, and for assessments upon property which is vacant, etc., etc. All these abatement claims are verified by Inspectors except in the case of hose, for which the owner's word is the only guarantee.

Superintendent's Accounts.

The general accounts of the Water Department as above stated are taken care of in the office of the Superintendent, and for this purpose a variety of books are in use. A list of these books is as follows: —

(1) Large record for gallons pumped, etc., etc.

(2) Meter record book containing data as to kind of meters, reason for removing (technical) cost of repairs, etc., etc.

(3) Index for meter books.

(4) Record for leakage stating reasons, and steps taken to repair.

(5) New supplies record giving kind, location, cost, etc., and summary of stock used for the month.

(6) Construction records; day work, location, stock, labor, total cost.

(7) Maintenance record; labor, location, meters, supplies, service box, stock.

(8) Requisition for material with — stub, copy of requisition made in letter-press book.

(9) Stock book for amount on hand at beginning of year and amount used. No record however of amounts received and balance on hand.

(10) Small book giving total expenditures for series of years under various items as reported. Also in the same book a list of churches and public buildings and amount used by latter.

(11) Small book showing expenditures in detail, month by month during current year under general heading and that in turn subdivided.

(12) Alphabetical list of employees.

(13) Pipe list, record of extensions, etc.

(14) Plans.

(15) Two small memo. books containing odds and ends of information.

(16) Pay rolls kept on time books in about the usual form and made up on the same form of pay roll sheets as other departments.

(17) Day books in which are recorded charges for supplies, repairs, etc. Blank is filled out by foreman on the street giving stock, labor, etc.; day book entry is then made giving amount of charge, the whole is posted to Superintendent's Records (5–7) and the bill is made out and put on Registrar's ledger.

(18) Two journals in which bills are copied verbatim, one for construction and one for maintenance. Each book has a number of pages set aside for each appropriation and on those pages are entered the bills applying to them.

(19) Index of bills approved; a book in columnar form with a column for each month. At the head of the page is the name of the appropriation and in the margin running down the page are names of bills taken from the journals above mentioned.

(20) Accounts—another columnar book arranged as follows:—

Date.	Pay Rolls.	Amt. of P. R.	Bills.	Expenditures During Mo.	Appro.

The page is headed with name of the appropriation, and pay rolls and bills are entered month by month, the latter taken from journals and "index" noted above, so that this book is a final summary showing totals expended on various appropriations month by month and state of appropriations. This is compared with the Auditor's accounts and verified.

Comments.

In view of the fact that the Water Works are municipal industries and should always be so considered, it is especially important that ledger accounts should be kept, showing the capital invested by the City in the enterprise, and also asset and liability accounts similar to those of a private enterprise of like nature.

In Cambridge water is furnished to all City departments without charge. If the quantity of water used by these departments were paid for at regular rates the additional income to the Water Department would amount to about $25,000 annually, according to estimates by officials of the Water Department. It is evident that in order to make an accurate showing of all the operations of the water works proper charges for water furnished to other departments should be introduced into the accounts whether these charges are finally paid or not.

Stock Books.

It has not been the practice in the past to keep at the yard any system of stock books or reports for the purpose of accounting for stock received and delivered and balances on hand. Such a system properly devised and carried out would be a desirable feature and would provide a check upon loss of material or extravagance and waste in the use thereof.

5. DEPARTMENT ACCOUNTING.

Street Department (P).

The Street Department has in charge the care and superintendence of matters relating to the appropriations for the following objects: —

Streets — Maintenance, etc.

Bridges — Except Boston bridges, which are in charge of the Bridge Department.

Cleaning streets.

Collection of ashes.

Edgestones and sidewalks.

Crossings and repairs.

Street watering.

The Superintendent of Streets is in charge of the department, and his office force consists of a head clerk, one permanent clerk and a stenographer, who divides her time between the Mayor's office and this department. Considerable care has been expended upon the book-keeping of this department by the late chief clerk, who recently resigned to take up other matters. The system in use is, in general, an adaptation of the regular double entry system of book-keeping, and has operated as follows: — At the close of the month each bill and pay roll has been journalized in the usual form, the debit being to the appropriation account to which the item chargeable, and the credit being to the account of the individual supplying the goods or on account called "Weekly Pay Roll." All these items are then posted to the "Expense Ledger," debits to appropriation accounts for various purposes, and credits to the individual or "Weekly Pay Roll" account. These individual and pay roll accounts are carried on through the year, and at the close are simply credit accounts, not balanced or transferred, but allowed to stand as a total credit.

When appropriations are voted by the City Council, a journal entry is made debiting an account called "General Appropriation," and crediting the various appropriation accounts, viz.: — Bridge, Maintenance, etc., etc. Expenses during the year are charged to the appropriation accounts as explained above. Balance at the end of the year is indicated, but nothing is done with it. On the "General Appropriation" account at the end of the year a balance is indicated which is the sum of the balances of all the various appropriation accounts. The difference between the sum of balances and the original amount of "General Appropriations" is carried to another account called "Department Expenses."

A certain amount of revenue accrues to the City from sales of various materials by the department and from sundry other sources and in order to record the transactions relating to these revenue matters the following method is pursued: —

Bills for materials sold, etc., are made out in the department, copied in a press copy book and journalized, the debit being to the account of the individual to whom the charge is made, and the credit being to an account with "Maintenance" or some other division of the Street Department.

Bills are then entered in the Treasurer's collection book which is a book kept for the convenience of the collector being a list of bills sent out, amounts of which are entered in columns for "Maintenance" or whatever the account is to which credit belongs and a column is reserved for entering date of payment. Items so entered on the journal are posted to accounts in the "Revenue" ledger, debiting individuals and crediting "Maintenance, Edgestones, and Sidewalks," and similar accounts. The

collector's book goes to the Treasury Department with the bills and when bills are paid the date of payment is entered in the proper column in this book.

After bills are paid proper journal entries are made, the accounts of individuals are credited and "Maintenance," etc., are debited closing both individual and impersonal accounts.

Assessments.

Assessments for street watering and for edgestones and sidewalks are recorded on the "Revenue" ledger. Watering assessments are made up on Ward Books similar to those in use in cities for taxes, this work being done in the Street Department office by clerks from the Assessors' office. The Street Department then send a letter to the Assessors saying that street watering assessments amount to a certain sum in each ward. Journal entry is then made: —

"Street Watering Assessment.
To Street Watering."

The Street Department ascertains from the Treasurer the amount of collections from month to month and entries are made in the journal: —

"Street Watering
To Street Watering Assessments."

Persons desiring abatements on account of assessements call at the office of the Street Department and if the claims are deemed just by this department the parties are given a slip stating that fact, which is then taken to the Assessors who in turn pass upon the matter and if they see fit they authorize an abatement. Journal entry is then made.: —

"Abatement
To Street Watering."

These entries are then posted to accounts of the same names in the "Revenue ledger."

Edgestones and sidewalks assessments are supposed to cover the cost of edgestones and bricks, the City supplying cost of sand and labor. After the completion of a job the Engineering Department examine and measure edgestones and count the bricks, sending certification as to measurement and count to the Street Department. The amount of assessments is figures by the Street Department and sent to the Clerk of Committees who makes a warrant to bring before the City Council. After

approval by the City Council and the Mayor, the amount is entered on the journal as follows: —

"Paving — Edgestones and Sidewalks.
To Sidewalk assessment."

And posted to the revenue ledger in the usual form. Payments and abatements are handled in same way as described for Street Watering assessments.

Subsidiary Books.

Pay Roll.

Slips are sent in every day by the foremen of the various divisions, cleaning, watering, etc., etc., giving the name of each employee and the number of hours employed. These are copied into a large pay roll book in which all employees are entered in alphabetical order, the division in which they are employed being indicated in a series of columns.

The time is figured up on this book, and pay rolls are made out and sent to the Treasurer by whom payments are made in the usual form.

Field Stone.

Book for recording weight of stone delivered to crushers by various parties.

Grading and Patching Record.

Paving Record.

Books in which are kept the amounts of labor and materials used on a given piece of work; result intended to show cost. Assessments are not, however, levied on this cost as a basis. These books are made up from slips sent into the office from the street.

Other Books.

Permits to Obstruct and Open Streets and to Obstruct Sidewalks.
Index book of area of streets for watering.
Index book of street work to be done.
Index book of petitions and orders.
Two small ledgers for memo. of costs.

Contracts in the usual form approved by the Mayor and the City solicitor, for purchases in excess of $300 are kept in document files in the vault.

Suggestions.

The above described method of journalizing and posting entails considerable detail work which would be simplified, and at the same time the

results achieved would be more satisfactory, by the adoption of the system of columnar cash-journals and appropriation ledger referred to in our general remarks in regard to accounting methods.

The subsidiary books appear to answer quite well the purposes for which they were designed, and can easily be modified to meet additional requirements which arise from time to time.

Public Buildings Department.

This department is in charge of the Superintendent of Public Buildings, who has as deputies a Superintendent of Janitors and two Inspectors. Office matters are cared for by one clerk. The duties of the department are twofold : —

(1.) Inspection of buildings in process of erection, etc.

(2.) Superintendence of schoolhouses, City Hall, and all other buildings owned or rented by the City.

Public Buildings.

Inspection Department.

Applications for permission to erect or alter buildings or install boilers, etc., are made on printed forms one of which is arranged for each class of work. After the Superintendent approves plans which are submitted to the department a permit signed by the Superintendent of Buildings is issued to the petitioners. There is in use a blank for Inspector's reports as to the work done under the authority of these permits but it is not complete nor to all appearances very satisfactory. Applications and Inspectors' reports are folded and the printed backs filled out. A record of permits is entered on a book provided for that purpose with columns for various kinds of data similar to that contained in the application and this book has an index in which names of owners are entered with reference numbers which numbers are consecutive in the record book. A book has also been kept for the purpose of entering complaints of violation of ordinances with remarks as to the result of inspection, etc. These appear to be all the records which have been in use for this part of the office.

Suggestions.

A valuable improvement would be the installation of a card system containing a card for each building on which should be entered the date of application, issue of permit, and completion of building. In the case of halls, etc., the result of periodical and systematic inspection should be

recorded in brief. The cards should thus be a brief record containing a digest of all necessary information regarding all buildings and at the same time should constitute an index, referring by number to other and more detailed information, on file in the office such as permits, plans, etc. A more satisfactory form of Inspectors' reports should be devised and the inspection of buildings arranged on a systematic plan. Inspectors' reports should be turned into the Superintendent to be examined by him personally and indexed by his clerk on cards as above mentioned. Complaints should be made on forms and handled in similar manner to Inspectors' reports. Permits should be signed by the Superintendent and in general the Superintendent should have matters more closely under his own personal supervision.

Public Buildings.

New Buildings.

Estimates, contracts, specifications, are made out in about the usual form, the documents themselves being kept in the office in a document file. During the process of building the contractors at certain times make statements of the amount of work done, and request a payment of seventy-five per cent. of this amount. The Superintendent of Public Buildings makes his own estimate of the work done, and notifies the Treasurer of the City upon a blank prepared for that purpose, that he is going to draw for a stated sum. No record appears to have been kept of the total cost of buildings, etc.

Suggestions.

As in the Inspection Department a card system, containing the name of each building with data of contract, completion, etc., etc., and reference by number to other documents, books, etc., in which full data are kept would be of great value. Cards should contain in this manner a history in brief of every building, and should constitute a catalogue of all the City buildings, which can be kept up and added to from time to time.

Public Buildings — Maintenance.

Janitors.

Janitors are paid on pay rolls in the usual form. One man is in charge of each building and hires such assistants as are necessary, paying for them out of his own salary. The Superintendent of Buildings now has a Superintendent of Janitors, just appointed, who is to have supervision of this work, and to inspect repairs, etc.

Repairs.

Individuals call at the office of the Superintendent of Public Buildings and state that certain matters require attention, asking him to see that attention is given to them. The present Superintendent has recently started a small record book in which these matters are entered, and memos. made of the disposition of them. Formerly no record was kept.

Supplies.

A small requisition blank is now in use for ordering supplies, etc. Apparently these are mostly ordered from time to time and issued from stock as needed.

A blank form for requisitions by schools has been in use to some extent signed by the janitor and the principal of the school requiring supplies.

SUGGESTIONS.

Blank forms should be devised for requisitions for supplies and repairs similar to those recommended for use in Boston. Annual estimates for supplies should be made up as far as possible and purchased in bulk by contract rather then by various small purchases. Apparently no record has been kept to show the condition of appropriations either by ledger accounts or otherwise but the Department has depended on the Auditor's reports to keep posted.

No duplicate of bills have been kept in the office in the past but the present Superintendent has inaugurated a system of requiring duplicates and keeping them on file. Under the system now in use bills are first copied into a journal with marginal indication of the building to which chargeable. Then all these amounts are gathered up on columnar sheets under titles for the various buildings to which chargeable and at the same time classified as to the nature of expense, *e. g.*, fuel, repairs, etc., etc. These figures are in turn copied into a columnar book exactly like the sheets. In this book a series of pages is reserved for each building so that the expenses for that building run on consecutively for some time. All this is a laborious and tedious process without results of commensurate value, as the information though distributed in columns is not gathered up in any comprehensive form.

SUGGESTIONS.

Keep duplicate bills numbered and filed. Use columnar journal for distribution and a ledger for accounts with appropriations in uniform method with other departments as suggested in general remarks upon accounting methods. Distribution, etc., to be in conformity with Auditor.

In connection with this department a suggestion may be made which is equally applicable to all others and this is in regard to the approval of bills. At present a bill passed on for payment bears on its face only the approval of the head of the department which, by ordinance, is sufficient authority for its payment. But as a safeguard to the City's interest and as evidence that all charges are carefully scrutinized there should be upon each bill a certificate that price and quality have been carefully checked and also evidence that the goods were furnished upon a formal requisition signed by a properly authorized person.

Assessors.

Previous to May 1st, a series of street books are written up, covering the various districts of the City, these books containing full detail of property and its location, etc. The books thus prepared are taken out on the streets by the assistant assessors, and changes and additions entered therein. When returned, these books as amended and changed, are copied in full into new books with the same ruling and containing the same information and intended for use in the department. From these there is still another series of books for the use of the public, one for each precinct, containing on one page full details of the personal property tax (including polls), and on the opposite page the real estate tax. These last are placed on counters outside the office railing, and are at all times accessible to all persons. In addition to the above there are real estate books giving only real estate taxes, so arranged as to be more easily traced. There are also books for recording abatements, for records of meetings of the Board of Assessors, for copies of transfers of real estate, for probate items, for copies of wills, etc. Abatements are certified on a check, which is sent to the Treasurer as his authorization for making same. It will be seen that the above system involves a great deal of copying and re-copying, necessitating the employment of about a dozen women clerks at the time of making up the books. Samples illustrating the card system in use in the Assessors' office at Brookline were shown to the principal Assessors, and the suggestion made that they go over to Brookline and look at the outfit. The Assessors have plans arranged in blocks in about usual form, but they complain that the blocks do not cover both sides of a street in many cases, and in consequence there is a variation in valuation.

Suggestions.

Consider the advisability of adopting a card system to some extent at least, *e. g.*, use some card arrangement that can be taken out on the street and save making up street books.

Have this put into shape and used for office and if necessary to have books for the public have them made up from these cards. Arrange another card system which shall show each street and all valuations for that piece of property for a series of years shown thereon.

Electric Department (S).

The principal office outfit necessary here is for technical records and this is already arranged on a card system in a very complete and satisfactory manner. No especial comment is necessary except to commend the system so far as technical records are concerned.

The financial side does not cut much of a figure as to accounting for there are but few bills. Bills for gas and electric lights are all from the Cambridge Company and only one per month. The salary of the Inspector is entered monthly as a bill, others on a time book. Bills are entered in two small journals, one for the Wire Department and one for the Street Lighting Department.

Suggestions.

Ledger cards are already in use for accounts with individuals and by adding one or two more cards accounts with appropriations could easily be kept so that the department would always be informed as to balances without the necessity as at present of relying entirely upon the Auditor's office. Bills should be entered and distributed upon columnar cash-journals.

Bridge Department.

The bridges connecting the cities of Boston and Cambridge are in charge of a Commissioner representing each city. For Cambridge a special Commissioner is provided while for Boston the Superintendent of Streets of that City acts as Commissioner. Eight bridges are under the supervision of these Commissioners, viz: —

Canal (or Craigie).
Harvard.
West Boston (Temporary pending completion of New Cambridge Bridge).
Prison Point.
Cambridge Street (or River Street).
Essex Street (or Brookline Street).
North Harvard Street (or Boylston Street).
Western Avenue.

Maintenance.

The bookkeeping for the Bridge Commissioners is carried on in the office of the City Engineer of Boston by a clerk acting for both cities. The method of accounting for expenditues for maintenance is as follows: Bills are entered in a journal each page of which is ruled to provide for entering the name of the parties who supply goods, the name of bridge, the item supplied, the total amount of bill and two columns for entering one half of the total to each city.

The ledger is also used which is ruled with columns for date of bill, name of party and then a series of columns for distributing expenditures under titles such as "Salaries," "Repairs," etc., etc., and a final column for totals. At the end of the month a red line is drawn across the page and the total of each column ascertained thus showing the total expenditures for various purposes for a particular bridge the name of which is entered at the top of the page. After the first month another total is entered just below the monthly total showing expenditures to date. Summaries are made up at the end of the book showing expenditures under the various titles for all the bridges. Schedules of bills, pay rolls and tabular matter for the information of the Commissioners are made out and copied in a press copy book.

Income from rents, wharfage, etc., is collected by the Cambridge Commissioner and turned over to the cities of Boston and Cambridge, one half to each city. There are no accounts kept by the Commissioners with these items and bills are rendered only to the telephone and railway companies; there is simply a certain amount of money turned over to each city from time to time and entered on the Auditor's books as receipts from "rents, wharfage, etc."

Suggestions.

In order that all business relating to the City may be done in proper form it is essential that accounts should be kept on the books of the Commissioners with all of the revenue items above mentioned and whenever monies are turned in to the Treasurer these payments should be accompanied by detailed statements of the items and their sources. It would also appear to be advisable in making collections to use forms of receipts in duplicate so that one of these can be turned in to the City Auditor's office and the other kept on file as a voucher at the Commissioner's office.

New Cambridge Bridge.

For recording transactions in regard to the construction of the New Cambridge Bridge a special set of books is in use consisting of a journal

and two ledgers. Bills are copied verbatim into the journal and amounts are posted in one ledger to the credit of individuals and in the other ledger to the debit of accounts representing particular portions of construction. The total of these latter accounts will ultimately show the total cost of the bridge. These books are of a temporary nature and as they apparently provide the necessary data no special comment is necessary.

PARK DEPARTMENT. (U).

The Park Department of the City of Cambridge is controlled by a Board of three Commissioners. New construction and the care of the Parks is in the hands of a Superintendent of Parks whose office work is carried on by one clerk.

The books have been kept on in a manner quite similar to that described above in the Street Department. Items have been journalized in the usual way and posted to ledger accounts of appropriations. All this work has been done in an exceedingly careful and intelligent manner so that the information required by the Commissioners could be presented to them promptly and in proper form.

Subsidiary card system and other forms of records have been installed and carried on in an apparently adequate manner.

Suggestions.

As before stated the accounts and records of the Department viewed as an office disconnected from other Departments of the City are in satisfactory condition but if the office is to be brought into line with the general scheme of uniform accounting certain modifications are necessary. These changes however, would not necessarily interfere with the present features which it is desirable to retain.

POLICE DEPARTMENT. (V).

The general bookkeeping in this department, that is the accounting for expenditures under the appropriations, is limited to the writing up of pay roll books and the entering of these amounts together with names and amounts of sundry bills on a journal. A small book is also used for keeping track of sales of cloth for officers' uniforms for which bills are made out, sent in with pay-rolls and the amounts deducted from pay envelopes.

A series of record books with complete index is in use for recording arrests and particulars regarding prisoners.

Suggestions.

No very extensive amount of bookkeeping is required in this department and our general plan for the use of the columnar cash-journal and appropriation ledger is sufficient.

A card system in place of the books for recording arrests might be devised in such a manner that each card would contain a full and consecutive history of each prisoner and by an alphabetical arrangement of the cards avoid the use of an index.

FIRE DEPARTMENT. (W).

The Chief of the Fire Department has no clerk or secretary, and therefore such accounts as are kept in regard to the expenditures are kept by the Chief himself at his home. This accounting consists in arranging the expenditures under various headings upon a columnar sheet so that at the close of the year these expenditures can be reported in classified form.

Suggestions.

It is to be said that the Chief has the affairs of this department so well in hand that by his own methods he has been able to achieve very satisfactory results but for the purpose of establishing records in a more permanent form it would follow that the records and accounts should be brought into accordance with our general plan for all departments and into harmony with the Auditor's books.

SCHOOL DEPARTMENT. (X).

The bookkeeping in this department, so far as relates to the accounting for expenditures under the various appropriations, has not been elaborated to any extent, but has been confined practically to copying bills into a journal and writing up pay-roll books.

Subsidiary books, however, have been arranged with much care for keeping track of purchases and stocks on hand of school books and other supplies. Ledger accounts are kept with each kind of text book and each item of supplies, so that any loss or waste should be detected at once.

Text books and supplies are issued to schools only upon a formal requisition duly signed. Text books are purchased as required, but supplies are purchased in large quantities and kept on hand in the store room. Bills are carefully checked as to quantities received from a book made up in the store room.

A small book is also arranged for making up tuition charges, and from this bills are made out and sent to the Treasurer for collection. The usual statistics in regard to number of pupils, etc., are also well kept.

Suggestions.

The introduction into this department of the columnar cash journal and appropriation ledger for recording expenditures and the following out of the general method suggested for revenue items, would place the accounting on a very satisfactory basis.

OVERSEERS OF THE POOR. (Y).

The work of this department is divided under the following heads:—

Outside Aid
City Home
City Farm
House Offal

Pay rolls for employees are made up by the Superintendent having supervision of work at the Home, etc., and are forwarded to the office of the Secretary. Amounts of pay rolls are copied into a journal and also in the same journal bills against the department are copied in full. The total expenditures as contained in this journal are summarized and classified in monthly totals upon columnar sheets arranged for that purpose with separate headings for each appropriation. No ledger accounts are kept with the appropriations but memorandum accounts are made up month by month to ascertain balances and verify the Auditor's figures.

Subsidiary books and records for keeping track of the data required within the department have been designed and carried on carefully and intelligently. A card system for recording transactions is worthy of special mention. A double card is arranged for recording the history of the case in question and a series of single cards, for applications, outside aid rendered month by month and for indoor aid where the applicants are sent to an institution. The application card is filled out by the person desiring aid; the outside aid card is posted month by month from the Secretary's orders and shows the amount of fuel, groceries, medical aid, etc., supplied and the indoor aid card is made up from bills.

Each card is for a single case and is arranged to cover a series of years. The single cards are placed within the folder card and the whole

kept in a document file. This system we highly commend as comprehensive, compact and well carried out. Letters and documents are filled in vertical files. Books, records, and documents are kept in an orderly manner in a spacious and well arranged vault.

Suggestions.

As the general condition of the accounting in this department is excellent, the modifications necessary to bring the books into line with the suggestions made in our remarks upon "general accounting" are all that will be required to put the office work of the department upon a very satisfactory basis.

CEMETERY DEPARTMENT. (Z).

The accounting for expenditures under the appropriations in this department has been confined to preparing the bills for payment in the usual manner and entering names and amounts in a memorandum book.

For money due to the department for fees for burials, etc., a receipt is issued and a record is made upon a stub which is retained in the office. For payments made directly to the department this receipt is signed and delivered to persons making such payment and money is sent to the Treasurer. Unpaid accounts are sent to the Treasurer for collection. From the stubs of these receipts entries are made upon a book provided for the purpose of recording the revenue of the department. This is arranged in columns for various data of names, amounts, etc. A series of smaller books arranged in a similar manner are in use for sending to the Treasurer with the bills to be collected. Amounts due for care of lots are also entered in these books and collected in the usual way. Persons making purchases of lots receive a certificate stating that upon payment of a specified sum they will be entitled to receive a deed for certain lots. Payment when made is acknowledged by the City Treasurer, and the City Clerk issues a deed.

For perpetual care of lots ledger accounts have been kept with each person paying for such care, the account being credited with interest on the fund at four per cent and debits with the cost of care.

Record has been kept in a series of books in regard to ownership of graves, lots and tombs, these records being accompanied by indexes and plans.

A variety of forms for permits, transfers, etc., are in use and cards of several forms for rearranging records have been prepared and are in use to some extent. All these books and records are in the Clerk's office.

In the Superintendent's office there is a complete duplication of records in regard to lots, etc.

To summarize remarks in regard to this department it must be said that the accounts and records have fallen into a very bad state. Although duplicate sets of records in regard to lots, etc., have been kept no one apparently feels competent to say that either record is correct and the impression gained is that both are faulty.

There is no good reason apparent for the keeping of these records in duplicate, as the offices of the clerk and the superintendent immediately adjoin each other, and one set of records would be easily accessible to both officials. There is on hand in the department a considerable quantity of unused books, indexes, etc.

Suggestions.

The use of cards for records in this department is to be commended, and those prepared for that purpose should be put into shape as soon as possible. At the same time the present records should be corrected and amended as much as necessary to bring them into accord with the facts. Duplications should be eliminated, and the old books retired as soon as possible.

The ledger accounts for perpetual care have not been written up since 1900, and as these accounts if properly kept would be of considerable value, they also could be brought up to date and hereafter carried on properly.

Accounting for expenditures under the appropriations should be arranged upon the uniform system recommended for all departments.

OTHER DEPARTMENTS.

In addition to the departments already reported upon we have visited the City Clerk, City Messenger, Engineer, Sewer, Health, Sealer of Weights and Measures and Library Departments and examined their books, records and office methods.

In a general way it may be said that in these departments, except the Sealer of Weights and Measures, the accounting for expenditures has been largely confined to keeping copies of bills in a journal. A good deal of care and attention have, however, been bestowed upon subsidiary books and records relating to the work of the departments. The Sealer of Weights and Measures has in use a journal for recording expenditures under appropriations similar in form to the cash-journals recommended in our remarks upon general accounting.

Suggestions.

As the records in regard to the work of these departments are in very good shape we advise little, if any modifications, in these at present. The accounting for expenditures requires only a moderate amount of book-keeping and can easily be adjusted to the requirements of the uniform system when each department is reached hereafter.

Very respectfully submitted,

HARVEY S. CHASE,
CHAUNCEY B. ALLEN,
Public Accountants and Auditors.

27 State Street, Boston,
March 28, 1903.

REPORT OF THE BOARD OF CEMETERY COMMISSIONERS

CAMBRIDGE, December 2, 1902.

To the Honorable, the City Council: —

The Board of Commissioners of the Cambridge Cemetery respectfully submits its forty-ninth annual report, the same being for the year ending November 30, 1902.

The amount appropriated at the beginning of the year was	$17,000 00
The total amount of expenditure was	$17,451 33

The additional appropriation required to meet the maintenance of the department was secured from the City Council in October and November.

For a detailed account of expenses, reference is made to the City Auditor's Report.

The receipts of the year have been as follows: —

Burial and tomb fees		$4,252 00
Care of lots		2,331 50
Sale of lots and graves		8,290 61
Foundations, brick graves, etc.		1,401 05
Interest on Cemetery Fund		1,975 02
Sundries		394 50
Sale of land to Commonwealth		1,300 00
Total		$19,944 68
The estimated revenue by this Board from General Account was	$17,500 00	
The estimated revenue by this Board from sale of land to the Commonwealth was	1,300 00	
		18,800 00
Increase of revenue over estimate		$1,144 68

The revenue account has been a most gratifying one, the liberal estimate of this Board of $17,500 having been increased by almost $1,200, the greater portion of the increase being due to the sales of lots.

The upward tendency of the past two years in the receipts for the sale of lots has continued during the season and almost $1,000 more revenue accrued from this source over the year 1901, making the total amount received for sales almost the largest in any one year during the existence of the Cemetery.

The demand for single graves has decreased, most people feeling able to purchase larger lots and several of these purchasers have availed themselves of the opportunity to place their lots in Perpetual Care.

During recent years the attention of lot owners has been called to the advisability of caring for their lots by the use of the Perpetual Care method, and it is pleasing to note that the recommendation of the Board in this respect is being quite generally adopted.

This system, by allowing an owner to provide for care forever by making a personal provision therefor during his own lifetime and in one payment, is advantageous alike to the individual lot owner and the City, as it insures to the one beyond doubt the preservation of the burial place in a becoming manner, and to the other a fund from which sufficient income will always be realized to maintain in a respectable manner those holdings which may not be in the control of the City or its agents.

The sum of $3,661.50 for twenty-nine lots has been added to the Perpetual Care Fund during the past season, bringing the total of the invested fund for this purpose to $58,102.68.

Besides the Perpetual Care Fund there has been inaugurated a Fund for lots which may be deeded in trust, and this fund now amounts to $132.

Three of the lots in the Cemetery have already been conveyed to the City in trust for the execution of certain plans of the grantors.

It might be well for proprietors of lots to examine carefully this system of conveying to the City in trust, as by its provisions it is possible to arrange for the use and preservation of the burial place for all time. Unless recourse is had to some such method, a burial place will descend by operation of law or devise to the heirs or devisees of an owner, and these heirs or devisees may not be actuated by any particular willingness to give to the lot even ordinary care.

By conveying to the City in trust, a lot owner can limit the number of interments in his lot, may assign the special places of burial, may designate the location of any tomb, curb, monument, headstone or fence on the lot, may prescribe the means of beautification by means of plants, flowers or shrubbery, may prevent the removal of any remains from said lot, — and these things for all time.

As the acceptance by the City in trust presupposes the perpetual care of a lot its becoming appearance is always assured.

In common with other departments of the City, the Cemetery Department acceded to the general wish and thoroughly cleaned the trees from the nests of the Brown Tail Moth. The great height of many of the trees rendered the task a difficult one, and a contract was made with Mr. B. F. Shattuck for the execution of the work.

Mr. Shattuck had performed similar work for the Park Department and it was felt desirable to employ only skilled and experienced help.

The cost to the department was $216.00.

During the coming season, it will doubtless become necessary to again prune the trees, but the cost will be much less than for the past season.

The method of lighting the office building is entirely inadequate. The present system of lamps is antiquated and dangerous and this Board would recommend an appropriation sufficiently liberal to allow the introduction of the gas or electric system of lighting, preferably the latter.

Three ranges of graves in the vicinity of River Avenue, and adjoining the reservation of the Metropolitan Park Commissioners, have been laid out at a cost of $400.00, and ninety-five graves therein are now ready for sale. This will make available 136 single graves in a most sightly and desirable location.

Several of the main avenues should be rebuilt as it becomes yearly more difficult to properly maintain them. Should a sufficient appropriation be made, work will be commenced on some of these avenues in the spring.

The epidemic of smallpox which startled the people of this community during the past year resulted fatally in thirty-three cases and, as it was the desire of the Board of Health that interment should be made as soon after decease as possible, special arrangements were made to agree with this wish. Men were detailed for the service and were kept in constant readiness during June, July, and August. Graves were laid out in such locations as would best subserve the public health.

The extra cost of the epidemic to this department was $426.00.

The following statistical information may be of interest :—

Lots sold	55
Graves sold	22
Lots ready for sale	148
Graves ready for sale	122
Interments in 1902	605
Interments (total)	24,775
Interments (Overseers of Poor)	20

METROPOLITAN PARK COMMISSION.

As a result of the negotiations of the past two years between the Metropolitan Park Commission and this Board, with reference to the exchange of certain portions of the Cemetery lands for lands of said Commission adjoining the Cemetery, the sum of $1,300 was paid into the City Treasury on January 18, 1902, and accredited to the revenue account of this Department.

This exchange appears to be a satisfactory one for all parties and it may be possible eventually to utilize some of the newly acquired lands for Cemetery uses.

ADDITIONAL LAND.

In accordance with the recommendations in the last two reports of the Board, the City Council is urged to take any needful steps to secure the property of the Mt. Auburn Cemetery Corporation on Coolidge Avenue, north of and immediately adjoining the Cemetery.

While these lands will be of no value for immediate use for Cemetery purposes, yet their control will enable the Board to remove or improve the buildings and gradually to prepare the grounds so that they may be used for burials, thus obliterating a very unattractive feature almost contiguous to the main Cemetery entrance.

As negotiations have already been made looking to a transfer of title to the City, it is hoped that speedy action will be taken to consummate a much needed improvement.

The Soldiers and Sailors' Lots on Summit and Prospect Avenues are in a satisfactory condition.

During the year only ordinary care has been needed.

The area, which was heretofore the location of the Pond, has been completely filled during the past year, but no effort has been made to grade it for lot purposes.

It will probably be impossible to utilize this spot for some years to come, as sufficient time must be allowed for a thorough settlement of the filling before proceeding to place a covering of loam. The appropriation for filling has been exhausted and during the coming season it is intended to give this tract only such attention as will render it fairly presentable. It will probably be seeded to grass in the spring.

DECEASE — COMMISSIONER BURNS.

Mr. James H. Burns presented his credentials as a member of the Board at the annual meeting held on February 3, 1902, and, after a service of one brief month, death suddenly claimed him as its own.

Mr. Burns was a public-spirited citizen, and, although a member of this Board for a few weeks only, he gave promise of great usefulness and his associates regretfully chronicle his early demise.

At the meeting of March 31st, Mr. Michael J. O'Brien attended the meetings of the Board as his successor.

GEORGE S. SAUNDERS, *Chairman*,
WILLIAM A. BERTSCH,
CHARLES O. WELCH,
HERBERT A. CHASE,
NATHAN C. LOMBARD,
MICHAEL J. O'BRIEN,

Board of Cemetery Commissioners.

ANNUAL REPORT OF THE CHIEF ENGINEER OF THE FIRE DEPARTMENT

Chief Engineer's Office, City Hall,
Cambridge, Mass., December, 1902.

To the Honorable, the City Council: —

Gentlemen: — In compliance with the provisions of Section 6 of the Ordinance governing the Fire Department, I have the honor to submit herewith a report for the fiscal year commencing December 1, 1901, and ending November 30, 1902, being my twenty-fourth annual report.

MANUAL FORCE.

The permanent force of the department was increased by the appointment of two additional men, on February 25, and the call force reduced one man.

As now provided by ordinance, the force is to consist of one hundred and twenty-six officers and men, fifty-nine to be permanently employed, and sixty-seven call members.

There is one vacancy in the call force at the present time.

APPARATUS.

Early in the year a new hose-wagon, to take the place of the hose-reel at engine house No. 4, was received, and put in service on December 14, and a new ladder-truck fitted with two thirty gallon chemical extinguishers and roller-bearing axles, to be located in ladder-house No. 2, on Portland Street, was received and placed in service on March 18. The old ladder-truck No. 2 was thoroughly repaired and painted and will now be used for relief purposes.

During the year all needed repairs were made on the apparatus, and as far as we are able to ascertain by frequent inspection is in good working order, with the exception of Engine No. 7. A leak was discovered in the boiler of this engine on November 28, and after an examination by a boiler-maker, as to its condition, it was deemed advisable to have the engine furnished with a new boiler, and immediate action was taken to that effect.

HOSE.

The total amount of serviceable two and one-half cotton rubber lined hose now in use by the several engine companies is 13,350 feet. During the year 750 feet was bought and an equal amount was condemned. There is also 900 feet of one-inch rubber-hose, and 250 feet of two-inch cotton and linen hose in service on chemical engines.

HORSES.

During the year three horses were sold in exchange for more suitable animals and two were bought. There was also one horse which was disabled for fire service by lameness that was sent to the farm of the Cambridge Home.

The total number of horses now in the service of this department and owned by the city is thirty-eight, and with few exceptions are in good condition and suitable for the service. The exceptions are horses which have grown old in the service and will soon have to be exchanged for younger ones.

HOUSES.

The customary repairs required to be made on houses each year has been attended to. They are now in good condition, and well arranged to suit the requirements of the service, with the exception of Ladder House No. 1, which is poorly located, inconvenient, and entirely unsuitable for the service required of it.

APPROPRIATION AND EXPENDITURES.

The appropriation for the maintenance of the department for the fiscal year ending November 30, was $93,500; the receipts were $130. The principal items of expenditures were as follows: —

Salaries	$77,554 51
Apparatus, and repairs on	3 355 19
Bedding and furniture	273 16
Buildings, repairs on	833 61
Fuel for houses and engines	1,183 19
Gas and electric light	751 22
Harnesses, and repairs on	569 21
Hay, grain and straw	4,713 42
Horses and horse hire	1,314 00
Horseshoeing	789 50
Hose, and repairs on	663 05
Washing bedclothes	245 49
Miscellaneous	838 23
Total	$93,083 78
Balance unexpended	416 22

FIRES AND ALARMS.

The total number of fires and alarms for the year from all causes was 273, the number of bell alarms, not including two second alarms given was 198. The still alarms numbered 75. Assistance was rendered at one fire out of the City.

The total losses together with the insurance and the amount of insurance paid, were as follows : —

	Losses	Insurance	Insurance Paid
On Buildings	$64,108 33	$573,242 00	$48,948 33
On Contents	54,580 39	299,339 50	53,186 39
Totals	$118,688 72	$872,581 50	$102,134 72

DIED.

William Parks, formerly a permanent member of the department, and on the pension roll, died on April 13.

DISCHARGED.

John J. Balfe, a call member, December 16, at his own request.
Joseph A. Henderson, a call member, April 12, at his own request.
John J. Foley, a call member, May 9, at his own request.
Louis Clauss, a call member, October 13, at his own request.
Winslow H. Dodge, a call member, October 22, at his own request.
Charles Barney, a call member, November 22, at his own request.

APPOINTMENTS.

Hiram W. Hooker, 2d, Joseph S. Hayes and James A. S. Drinkwater were appointed call members December 31; John Gibson Jr. and William J. Atkinson were appointed permanent members February 25; Daniel F. McConologue and Edward Grant were appointed call members May 13; Francis V. Doyle was appointed a call member June 3; Edward Flynn and William J. Sullivan were appointed call members November 25.

ACCIDENTS.

I am pleased to report that few accidents have befallen members of the department the past year, and that those that occurred were not of a serious nature.

RECOMMENDATIONS.

I again desire to call attention to the great need of having a suitable building for storing the spare apparatus, so that it can be properly looked after, and kept in a central locality and in condition for immediate use. At present we are paying for the storage of the spare ladder-truck. A building for this purpose has long been needed, and I would respectfully recommend that action be taken the coming year on this matter.

In accordance with previous recommendations action was taken by the present City Council toward providing land upon which to erect a building for additional fire apparatus in old ward five. This is a want that has been greatly needed in that section, which is growing very rapidly and should have better fire protection.

I would therefore recommend the advisability, should the land and house be provided, of locating a ladder-truck and combination hose-wagon in that district, and the organizing of companies to man them.

CONCLUSION.

To the officers and members of the fire department my thanks are due for their faithful attention to duty, and their promptness in responding to the several calls during the year.

Respectfully submitted,

THOMAS J. CASEY,
Chief Engineer.

APPENDIX

ROLL OF OFFICERS AND MEMBERS.

ENGINEERS.

Name.	Rank.	Age.	Residence.
Thomas J. Casey	Chief Engineer	69	168 Lexington avenue.
Nathaniel W. Bunker	Asst. Chief Engineer	59	276 Portland street
Timothy Curran	Chief's Driver	33	182 Lake View avenue.

ENGINE COMPANY No. 1.

House, 108 Mt. Auburn Street.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force.			
31	Daniel E. Powers	Engineman	43	108 Mt. Auburn street.
2	Hiram W. Hooker	Asst. Engineman	63	108 Mt. Auburn street.
1	Bernard J. Coakley	Driver	27	20 Walden street.
28	Daniel E Shea	"	45	6 DeWolf street.
4	Thomas F. Drummond	Hoseman	34	3B Brattle street.
33	John Gibson, Jr.	"	27	114 Foster street.
	Call Force.			
27	John L. Jones	Captain	51	409 Green street.
29	Thomas H. Kneeland	Lieutenant	38	108 Mt. Auburn street.
25	James Jefferson	Hoseman	48	4½ South street.
23	J. Joseph Corcoran	"	42	34 Ash street.
74	James W. Irwin	"	47	9 Story street.
97	George B. Morse	"	35	6 DeWolf street.
30	Francis V. Doyle	"	25	37 Willard street.

ENGINE COMPANY No. 2.

House, 384 Massachusetts Avenue.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force.			
41	William H. Cairns	Engineman	39	18 Vernon street.
80	John H. McDermott	Asst. Engineman	51	11 Dodge street.
75	Charles A. Olsen	Driver	35	6A Clinton street.
68	James H. Furfey	"	45	59 Prince street.
34	Herman E. Gutheim	Hoseman	26	60 Spring street.
	Call Force.			
32	James Cunningham	Captain	60	25 State street.
33	Arthur C. Day	Lieutenant	66	47 Austin street.
35	Benjamin D. Foss	Hoseman	66	28 Elm street.
37	John Haley	"	48	358 Massachusetts avenue.
88	Charles H. Cutting	"	50	812 Main street.
40	George F. Donovan	"	33	30 Union street.
110	Edward Flynn	"	25	251 Elm street.

ENGINE COMPANY No. 3.

House, 35 Third Street.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force.			
7	Hiram Blood	Engineman	71	66 Fifth street.
62	Charles A. Blair	Asst. Engineman	41	22 Springfield street.
8	Peter F. McSorley	Driver	43	94 Otis street.
49	Patrick J. Hayes	"	40	92 Gore street.
15	William F. Newman, 2d	Hoseman	32	37 Jefferson street.
	Call Force.			
42	Walter Baker	Captain	49	40 York street.
48	John F. Brassil	Lieutenant	48	3 Marney street.
45	Eliot E. Alley	Hoseman	66	241 River street.
46	Timothy J. Mahoney	"	55	346 Vine street.
112	Charles H. Leddy	"	42	20 Hardwick street.
16	William Reilly	"	33	34 Gore street.
78	Joseph A. Lincoln	"	32	57 Spring street.

ENGINE COMPANY, No. 4.

House, 2029 Massachusetts Avenue.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force.			
10	John E. Ricker.	Engineman	58	2029 Massachusetts avenue
55	Jeremiah O'Connor	Asst. Engineman	44	2 Olive place.
19	Albert S. Benson	Driver	60	52 Boylston street.
11	George E. Muzzey	"	61	5 Blake street.
57	John T. Henderson	Hoseman	33	27 Creighton street.
	Call Force.			
51	Daniel A. McCaughin	Captain	45	Rear 5 Russell street.
53	Redmond M. Burke.	Lieutenant	33	Rear 5 Russell street.
54	George F. Durgin	Hoseman	34	48 Norris street.
52	Joseph T. Vocell.	"	37	12 Bolton street.
105	William F. Henderson	"	38	74 Rice street.
50	George L. Vocell.	"	33	23 Bolton street.
56	Daniel F. McConologue	"	30	28 Harvey street.

ENGINE COMPANY, No. 5.

House, Inman Square.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force.			
13	Charles E. Conner	Engineman	51	1335 Cambridge street.
115	Frank McGrath	Asst. Engineman	38	168 Willow street.
3	Charles R. Hooker	Driver	58	1411 Cambridge street.
63	George W. Montgomery	"	42	40½ Baldwin street.
9	George L. Chuch	Hoseman	23	90½ Inman street.
	Call Force.			
59	Francis P. Scanlan.	Captain	56	1343 Cambridge street.
64	William T. King.	Lieutenant	46	231 Prospect street.
61	George W. McIntire.	Hoseman	48	7 Springfield street.
66	James H. McGrath	"	46	12 Seckle street.
60	George W. Stevens	"	36	1307 Cambridge street.
12	John T. Downey	"	24	994 Cambridge street.
101	Hiram W. Hooker, 2d	"	26	1411 Cambridge street.

ENGINE COMPANY No. 6.

House, 176 River Street.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force.			
98	J. Lewis Howe	Engineman	49	184 River street.
87	Charles A. Cairns	Asst. Engineman	36	152 River street.
92	Robert J. Buchanan	Driver	31	
127	John J. O'Callahan	"	33	564 Green street.
47	Exurie J. Ouimette	Hoseman	39	11A Jay street.
	Call Force.			
24	John H. Brown	Captain	51	206 River street
73	Charles H. Waite	Lieutenant	56	46 Lopez street.
100	John E. Savage	Hoseman	48	29 Andrew street.
103	Thomas F. Mullin	"	29	184 River street.
106	Mortimer F. Hartney	"	28	3 Jay street.
71	Charles P. Cox, Jr.	"	31	6 Howard street.
104	William J. Sullivan	"	24	342 Broadway.

ENGINE COMPANY No. 7.

House, 350 Main Street.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force.			
85	Thomas F. O'Connell	Engineman	41	155 Webster avenue.
36	John McCarthy	Asst. Engineman	49	139 Massachusetts avenue.
121	John D. Shea	Driver	31	136 Winsor street.
126	Dennis R. Sullivan	"	31	35 Harvard street.
5	Henry J. O'Brien	Hoseman	26	748 Cambridge street.
	Call Force.			
93	George A. Garrity	Captain	41	7 Pioneer street.
124	Joseph A. Wood	Lieutenant	40	81 Hampshire street.
109	James E. Bligh	Hoseman	31	142 Willow street.
125	Edward Clark	"	34	234 Winsor street.
96	Louis J. Anshelm	"	42	71 Portland street.
108	James A. S. Drinkwater	"	28	721 Main street.
89	Joseph S. Hayes	"	24	81 Webster avenue.

CHEMICAL ENGINE COMPANY No. 1.

House, 5 Western Avenue.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force.			
17	Lewis C. Clark	Lieutenant	57	264 Green street.
82	James T. McCabe	Engineman	39	125 Green street.
99	John H. Dardis	Driver	29	27 Park street.

CHEMICAL ENGINE COMPANY No. 2.

House, 167 Lexington Avenue.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force.			
58	William H. Barrow.....	Lieutenant.....	33	106 Fayerweather street.
6	Richard J. Doyle.....	Engineman.....	28	37 Willard street.
18	William Haley.....	Driver.....	56	133 Lexington avenue.

LADDER COMPANY No. 1.

House, Eliot Square.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force.			
22	John T. McNamee	Captain.....	47	96 Winthrop street.
114	Angus H. McDonald.....	Lieutenant.....	32	Ladder House No. 1.
26	Walter E. Chapman.....	Driver.....	35	125 Mt. Auburn street.
77	Benjamin McArthur.....	Ladderman	28	4 DeWolf Place.
122	Arthur G. McArthur.....	"	30	4 DeWolf Place.
	Call Force.			
79	Edward P. Donohue.....	Ladderman	45	1 Willard street court.
72	Joseph E. Burke.....	"	40	149 Putnam avenue.
70	John W. Jefferson.....	"	37	98 Winthrop street.
120	Frederick Quenandon ...	"	30	562 Franklin street.
107	Edward Grant	"	25	11 Gerry street.
119	Frederick A. Reed.....	"	31	17 Howard street.

LADDER COMPANY, No. 2.

House, 276 Portland Street.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force.			
44	Cutler L. Vose.....	Captain.....	34	8 Douglass street.
83	James M. Casey.....	Lieutenant.....	38	775 Cambridge street.
20	Thomas Minnaugh	Driver.....	49	35 Warren street.
38	Albert R. Wait.	Ladderman	30	934 Cambridge street.
86	William J. Atkinson.....	"	26	956 Cambridge street.
	Call Force.			
90	Albert Smith.....	Ladderman	48	233 Broadway.
95	Louis J. Stanger.....	"	48	275 Vine street.
111	Jeremiah F. Hayes.....	"	36	17½ Marney street.
116	Thomas J. Lane.....	"	38	134 Otis street.
113	William G. Johnson	"	41	14 Springfield street.
112	Thomas J. Parks.....	"	26	148 Berkshire street.
21	Edward E. Gaughan.....	"	24	78 Berkshire street.

LADDER COMPANY, No. 3.

House, 394 Massachusetts Avenue.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force.			
43	William F. Newman	Captain.....	57	66 Winter street.
117	Edward F. Conroy.	Lieutenant.....	31	10 Mt. Auburn street.
39	Thomas H. McCourt	Tillerman	32	62 Columbia street.
118	William C. Richardson...	Driver.....	34	394 Massachusetts avenue.
	Call Force.			
69	Charles Emerson	Ladderman	57	5 Kinnaird street.
76	Charles A. Sharon	"	54	Rear 13 Pine street.
91	Lincoln E. Wheeler	"	58	16 Columbia street.
84	William D. Donovan	"	29	18 Blanche street.

FIRES AND ALARMS.

From December 1, 1901, to December 1, 1902.

DECEMBER

Sunday, Dec. 1, 12 19 A. M. Box 13.

No. 306 Cambridge Street. Owned by F. X. Fitzpatrick as an unoccupied building. Loss, trifling. Cause incendiary.

Tuesday, Dec. 3, 4.48 P. M. Box 93.

No. 109 Cushing Street. Owned and occupied by Margaret Doyle as dwelling. Cause, smoke mistaken for fire.

Thursday, Dec. 5, 10.32 P M. Box 32.

No. 438 Winsor Street. Owned by Heffernan Bros. Loss, $648. Insurance $1,500. Occupied by Heffernan Bros. as stable. Loss, $974. Insurance, $1,500. Occupied by P. D. Crimmins as stable. Loss, $133. Insurance, $325. Originated on first floor. Cause, unknown.

Saturday, Dec. 7, 4.45 P. M. Still.

No 281 Harvard Street. Owned by M. A. Bradeen Loss, $200. Insurance, $5,000. Occupied by O. G. Bradeen as dwelling. Loss, $300. Insurance, $1,500. Originated on first floor. Cause, defective chimney.

Saturday, Dec. 7, 10.13 P. M. Box 29.

No 19 Vandine Street. Owned by J. W. Hammond. Loss, $745. Insurance, $1,000. Occupied by Patrick Finley as stable. Loss, $1,850. Insurance, $3,500. Occupied by James Owens as stable. Loss, $125. No insurance Occupied by F. J. Coulter as stable. Loss, $500. Insurance, $500. No. 17. Owned by Joaquin Cabeceira as dwelling. Loss, $110. Insurance, $2,000. Originated in the stable. Cause, supposed by horse blankets, drying near stove, taking fire.

Sunday, Dec. 8, 8.42 P. M. Box 271.

No. 2407 Massachusetts Avenue. Owned by Irvin R. Dix. Loss, $150. Insurance, $500. Occupied by Irvin R Dix as hardware. Loss, trifling. No. 2405. Occupied by Fred S Glynn as bicycle repairer. Loss, $27. Insurance, $300. Occupied by Edward Grant as jeweler. Loss, $35. Insurance, $300. Originated in a water closet in the cellar. Cause, supposed by the dropping of a lighted match.

Tuesday, Dec. 10, 11.26 P. M. Box 36.

No. 22 Pearl Street. Owned by C. E. Smart. Loss, $60. Insurance, $4,800. Occupied by S. C. Pike as dwelling. Loss slight Originated on the roof. Cause, sparks from chimney.

Thursday, Dec. 12, 10.35 A. M. Box 152.

No. 1156 Massachusetts Avenue. Owned by C. W. Calkins. Loss, $88. Insurance, $1,000. Occupied by P. F. Campbell & Co. as tailoring. Loss, $498. Insurance, $1,000. Originated in the basement in workroom. Cause, ignition naphtha.

Thursday, Dec. 12, 5.47–5.54 P. M. Box 27.

Boardman Street. Owned by the City of Cambridge as Allston schoolhouse. Loss, $15,000. No insurance. Originated in the basement. Cause, overheated furnace pipe.

Saturday, Dec. 14, 8.59 A. M. Box 27.

No. 237 Broadway. Cause, smoke from chimney mistaken for fire.

Monday, Dec. 16, 8.25 A. M Still.

No. 44 Warren Street Occupied by Mary Burke as dwelling. No loss. Cause, pan of fat on stove taking fire.

Thursday, Dec. 19, 9.25 A. M. Still.

No. 40 Prospect Street. Cause, explosion of gas. No loss.

Saturday, Dec. 21, 9.47 A. M. Box 26.

No. 26 Portland Street. Owned by E. H. Rogers. Loss, $10. Insurance, $1,750. Occupied by John Connery as dwelling. Loss, $20. No insurance. Cause, sparks from stove setting bed afire.

Saturday, Dec. 21, 7.51 P. M. Box 41.

No. 8 Kenwood Street. Owned by I. B. Nixon. Loss, $1,005. Insurance, $2,000. Occupied by R. G. Nixon as dwelling. Loss, $700. Insurance, $1,000. Cause, defective chimney.

Sunday, Dec. 22, 9.16 A. M. Box 14.

No. 125 Spring Street. Owned by Bridget Coughlin as dwelling. Loss, $69. Insurance, $2,000. Originated in the cellar. Cause, thawing out frozen water-pipe.

Sunday, Dec. 22, 6.29 P. M. Box 34.

No. 333 Columbia Street. Owned by E A. Cherest. Loss, $25 Insurance, $1,200. Occupied by E. A. Cherest as dwelling. Loss, $12. No insurance Cause, defective chimney flue.

Tuesday, Dec. 24, 3 A. M Box 59.

No. 9 Boylston Street Owned by J. H. H. McNamee. Loss, $170. Insurance, $1,500. Occupied by Western Union Telegraph Co. Loss trifling. No. 7 Occupied by E. L. Bornstein as tailor. Loss, $100. Insurance, $400. Cause, electric wires.

Friday, Dec. 27, 7.14 P. M. Box 52.

No. 988 Massachusetts Avenue. Owned by C. S. McClure. Loss, trifling. Occupied by T. J. Phelps as caterer and dwelling. Loss, $400. Insurance, $2,500. Originated in a clothes closet Cause, explosion of lighted oil lamp.

Monday, Dec. 30, 6.31 P.M. Box 26.

No 8 Moore Street. Occupied by David McLeod as dwelling. Loss, trifling. Cause, pan of fat on stove taking fire.

Tuesday, Dec. 31, 7.10 P. M. Still.

No. 51 Lopez Street. Owned by estate of J. P. Squire. Loss, trifling. Originated on the roof. Cause, sparks from a plumber's furnace.

JANUARY.

Wednesday, Jan. 1, 12.20 A. M. Box 49.

No. 1640 Cambridge Street. Owned by J. B. Bassett *et al.* No loss. Originated in the cellar. Cause, electric wires.

Wednesday, Jan 1, 11.02 A. M. Box 112.

No. 61 North Street. Cause, steam mistaken for fire.

Wednesday, Jan. 1, 6.28 P. M. Box 29.

No. 34 Berkshire Street. Owned by J. W Hammond as dwelling. No loss. Cause, soot in the chimney afire.

Thursday, Jan. 2, 10.01 A. M. Box 131.

No. 674 Cambridge Street. Occupied by Michael Looney as variety store. Loss, $28. Insurance, $800. Cause, dropping fire amongst waste paper.

Thursday, Jan. 2, 10.54 A. M. Box 49.

No. 115 Ellery Street. Occupied by William Morrissey as dwelling. No loss. Cause, wood in stove oven taking fire.

Thursday, Jan. 2, 8.15 P. M. Box 414.

No. 71 Ninth Street. Owned by Geopper Bros. Co. Loss, $400. Insurance, $4,550. Occupied by Geopper Bros. Co. as barrel manufactory. Loss, $3,500. Insurance, $24,550. Originated in stock room Cause, supposed of incendiary origin.

Sunday, Jan. 5, 2.30 P M. Still.

No. 12 Reservoir Street. Owned by A. S. Hill as dwelling. No loss. Cause, soo in chimney afire.

Tuesday, Jan. 7, 12,35 A. M. Box 17

No 38 Hastings Street. Owned by John Goodrich as dwelling. Loss, $150. Insurance, $1,500. Originated in a partition on first floor. Cause, supposed by mice and matches.

Tuesday, Jan. 7, 1.32 A. M. Box 17.

No. 38 Hastings Street. Cause, rekindling of fire.

Tuesday, Jan. 7, 9.17 P. M. Still.

No. 113 Harvard Street. Owned by Robert Hunter. Loss, $50. Insurance, $30,000. Occupied by Rebecca McWain as dwelling. No loss. Originated in bath-room on fourth floor. Cause, towel in contact with gas jet.

Saturday, Jan. 11, 12.39 A. M. Box 26.

No. 758 Main Street. Owned by Howe estate. Loss, $75. Insurance, $1,600. Occupied by T. J. Paine as second hand articles. Loss, $128. Insurance, $2,500. Originated in a closet amongst oil and varnish. Cause, supposed by spontaneous combustion.

Monday, Jan. 13, 5.07 P. M. Box 68.

No. 55 Upland Road. Occupied by C. E. Davis as dwelling. No loss. Originated in the front hall. Cause, defective gas burner.

Thursday, Jan. 16, 9 09 P. M Box 23.

No. 114 Pearl Street. Owned by estate of J. P. Squire. Loss, $524. Insurance, $5,000. Occupied by Ella Thompson as dwelling. Loss, $150. No insurance. Originated in a bedroom on third floor. Cause, unknown.

Friday, Jan. 17, 4 35 A.M. Still.

No 19 Gore Street. Occupied by James Cooper as dwelling. No loss. Cause, soot in chimney afire.

Saturday, Jan. 18, 12.26 A. M. Box 152.

No. 1268–1270 Massachusetts Avenue. Owned by A. D. Club. Loss, $815. Insurance, $40,000. Occupied by I. C. Snow as tailor. Loss, $1,538. Insurance, $2,500. Occupied by Briggs & Briggs as music and musical instruments. Loss, $1,000. Insurance, $4,000. Originated in tailor-shop. Cause, unknown.

Saturday, Jan. 18, 6.05 P. M. Still.

No. 512 Massachusetts Avenue. Occupied by George Southward as leather findings. Loss, $31. Insurance, $400. Cause, kerosene oil lamp taking fire.

Tuesday, Jan. 21, 4.06 A. M. Box 26.

No. 196 Washington Street. Owned by A. A. Spencer. Loss, $375. Insurance $1,500. Occupied by Carl Schultz as dwelling. Loss, $28. Insurance, $700. Cause, defective chimney.

Thursday, Jan. 23, 5.31 P. M. Box 32.

No. 221 Elm Street. Owned by P. J. Fitzgerald. Loss, $50. Insurance, $2,000. Occupied by Ulrick Brazeau as dwelling. Loss, $38. Insurance, $500. Cause, overturning of a lighted oil lamp.

Thursday, Jan. 23, 7.09 P. M. Box 149.

No. 4 Magnolia Avenue. Owned by E. B. Gromley. Loss, $382. Insurance, $3,500. Occupied by E. J. Gormley as groceries and provisions. Loss, $220. Insurance, $1,000. Originated in the office. Cause, explosion of lighted oil lamp.

Thursday, Jan. 23, 11.25 P. M. Box 32.

No. 235 Webster Avenue. Owned and occupied by Louis Ferman as junk shop. Loss, trifling. Cause unknown.

Saturday, Jan. 25, 2.25 P. M. Still.

No. 160 Lake View Avenue. Occupied by W. M. Snow as dwelling Loss, trifling. Cause, defective gas pipe.

Sunday, Jan. 26, 10.45 P. M. Box 216.

No. 51 Main street. Owned by Austin Ford as blacksmith shop. Loss, $30. No insurance. Cause, hot coals from forge.

Tuesday, Jan. 28, 7.50 A. M. Box 17.

No 33 Burleigh Street. Occupied by S. J. Lee as dwelling. Loss trifling. Cause, oil stove taking fire.

Wednesday, Jan. 29, 7.34 P. M. Box 41.

No. 32 Walnut Street. Occupied by Goodwin Isenberg as dwelling. Loss. trifling. Originated in a lounge. Cause, child and matches.

Wednesday, Jan. 29, 8 04 P. M. Box 176.

No. 182 Upland Road. Occupied by H. A. Norton as dwelling. No loss. Cause, soot in chimney afire.

Wednesday, Jan. 29, 10.08 P M. Box 34.

No. 41 Union Street. Owned by Alexander Green as dwelling. Loss, $165, Insurance, $2,500. Originated in the basement Cause, unknown.

Friday, Jan. 31, 3.21 A. M. Box 61.

No. 67 Murray Street Owned by University Associates. Loss, $1,000. Insurance, $1,000. Occupied by A. C. Smith as dwelling. Loss, $150. No insurance. Originated on first floor. Cause, unknown.

FEBRUARY.

Monday, Feb. 3, 2.41 P. M Box 16.

No. 150 Broadway. Owned by Henry Thayer & Co. Loss, $220. Insurance, $18,000. Occupied by Henry Thayer & Co. as manufacturing chemist. Loss, $1,300. Insurance, $54,000. Originated on fourth floor. Cause, overboiling of wax.

Wednesday, Feb. 5, 3.09–3.15 A M. Box 14.

Thorndike Street. Owned by The Sacred Heart School Association. Loss, $15,490. Insurance, $75,000. Unoccupied. Originated on third floor. Cause, supposed by spontaneous combustion of oily rags used by carpenters.

Thursday, Feb. 6, 7.30 A. M. Box 53.

No. 45 Winthrop Street. Owned by Alexander Boothly. Loss, $1,255. Insurance, $3,500. Occupied by G. R. Ainsworth *et als* as dormatory. Loss, $300. No insurance. Originated in the basement. Cause, hot air pipes.

Thursday, Feb. 6, 7.43 P. M. Box 427.

No. 205 Broadway. Owned and occupied by Barbour, Stockwell Co. as iron founders. Loss trifling. Originated in engine-room. Cause, sparks from furnace.

Friday, Feb. 7, 11.48 A. M. Box 131.

Jefferson Street. Cause, oil in the street set afire by boys.

Friday, Feb. 7, 6.56 P. M. Box 32.

No. 234 Elm Street. Occupied by Henry Koenig as dwelling. Loss, $12. No insurance. Originated in a lounge. Cause, child and matches.

Saturday, Feb 8, 2 A. M. Still.

No. 97 Mt. Auburn Street. Occupied as club house. No loss Cause, soot in chimney afire.

Thursday, Feb. 13, 11.10 A. M. Box 139.

No. 211 Allston Street Owned by R. L. Snow as carpenter shop. Loss, trifiing Originated in the roof. Cause, defective smoke pipe.

Thursday, Feb. 13, 11.44 A. M. Box 16.

No. 118 Broadway. Occupied by Frank Borowski as furniture repairer. Loss, slight. Originated in excelsior in the cellar. Cause, unknown.

Saturday, Feb. 15, 3.20 P. M. Still.

No. 247 Cambridge Street. Occupied by L. A. Stingle as hardware store. Loss, $59. Insurance, $4,000. Cause, dropping of a lighted match into oil.

Sunday, Feb. 16, 3.04 A. M. Box 31.

No. 851 Cambridge Street. Owned by Mary Glynn. Loss, $39. Insurance, $3,000. Occupied by M. J. Donovan as groceries and provisions. Loss, $19. Insurance, $800. Originated in sheathing around chimney. Cause, soot in chimney taking fire.

Sunday, Feb. 16, 5.55 P. M. Still.

Fresh Pond Lane Owned by T. W. Dee as hot-house. Loss slight. Originated on roof of furnace room. Cause, sparks from chimney.

Monday, Feb. 17, 1 P. M. Still.

Massachusetts Avenue. Owned by the City of Cambridge as City Hall. No loss. Cause, blowing out of a fuse in electric wires.

Monday, Feb. 17, 10.02 P. M. Box 271.

No. 8 Cedar Street. Owned by I. V. Smith. Loss, $300. Insurance, $600. Occupied by Josephine Lynch as variety store. Loss, $40. No insurance. Originated in a partition. Cause, overheated stove pipe.

Tuesday, Feb. 18, 6.55 A. M. Box 61.

No. 25 Eliot Street. Owned by C. A. Mason. Loss, $561. Insurance, $2,000. Occupied by Willard Brothers as carpenters. Loss, $426. Insurance, $1,000. Originated in second floor. Cause, sparks from blacksmith's forge.

Tuesday, Feb. 18, 7.36–8 12 P. M. Box 16.

No. 113 Broadway. Owned by Greely estate. Loss, $1,941. Insurance, $22,000. Occupied by I. G. Hersey as carpenter and builder. Loss, $3,500 Insurance, $35,000. Occupied by F. L. Whitcomb as carpenter. Loss, $1,178. Insurance, $7,500 Occupied by G. W. Seaverns Co. as piano action. Loss, $1,350. Insurance, $26,000. Originated in the shaving room near boilers. Cause, sparks from furnace.

Wednesday, Feb. 19, 6.55 A. M. No alarm given.

Rear Prison Point Street. Owned by Boston and Maine R. R. Co. Loss, slight. Originated in boiler-house. Cause, hot coals from furnace. Engine Co. No. 44 (Fire Boat) of Boston were called and extinguished the fire.

Wednesday, Feb. 19, 6.01 P. M. Box 216.

No. 35 Main Street. Owned by Rawson & Morrison as machinists. Loss, $100. Insurance, $15,300. No loss on contents. Originated in a workman's overalls in a cupboard. Cause, spontaneous combustion.

Thursday, Feb. 20, 1.45 A. M Box 115.

No. 265 Third Street. Owned by the Geo. F. Blake Manufacturing Co. Loss, trifling. Originated in woodwork over the core oven in foundry. Cause, sparks.

Thursday, Feb. 20, 7.52 P. M. Still.

No. 655 Massachusetts Avenue. Owned by Pratt Brothers. Loss, $50. Insurance, $ 9,000. Occupied by Edward Thorndike as apothecary. No loss. Originated a in water-closet in the cellar. Cause, rats and matches.

Friday, Feb. 21, 2.56 A. M. Box 137.

No. 44 Howard Street. Owned by John Snyder as hen-coop. Loss slight. Cause, unknown.

Friday, Feb. 21, 8.41 P. M. Box 15.

No. 197 Vine Street. Owned by Hugh Campbell estate. Loss, $50. Insurance, $800. Occupied by Joseph Dupont as barber. Loss, $30. No insurance. Cause, overturning of a lighted lamp.

Saturday, Feb. 22, 9 A. M. Box 139.

No. 117 Magazine Street. Owned by F. S. Adams. Loss, $100. Insurance, $3,000. Occupied by H. C. Jones as dwelling. Loss, $83. Insurance, $1,000. Originated in a partition in the basement. Cause, rats and matches.

Saturday, Feb. 22, 5.51 P. M. Box 58.

No. 1600 Massachusetts Avenue. Owned and occupied by C. J. McIntire as dwelling. Loss trifling. Cause, gas jet igniting curtain

Monday, Feb. 24, 1 25 A.M. Box 59.

No. 40 Boylston Street. Owned by Read estate. Loss, $589. Insurance, $5,000. Occupied by M. J. O'Brien as tea store. Loss, $1,113. Insurance, $2,500. Cause, unknown

Wednesday, Feb. 26, 1.26 P.M. Box 165.

Hurlburt Street Owned by P. J. Lyons as lime. Loss, trifling. Cause, slacking of barrels of lime.

Wednesday, Feb. 26, 7.26 P.M. Box 13.

No 28 Fourth Street. Owned by Hannah Murphy. Loss, $29. Insurance, $800. Occupied by Hannah Murphy as dwelling. Loss, $5. Insurance, $500. Cause, lighted lamp setting curtain afire.

MARCH.

Saturday, March 1, 11.57 P.M. Box 17.

No. 85 Harvard Street. Owned by Lever Brothers. Loss, $487. Insurance, $3,000. Occupied by G. J Moore as grocery. Loss, $600. Insurance, $600. Cause, dropping of a lighted oil lamp.

Sunday, March 2, 1.23 P.M. Box 169.

No. 138 Rindge Avenue. Occupied by M. J. Delaney as dwelling. No loss. Originated in rubbish in the cellar. Cause, unknown.

Sunday, March 2, 3.25 P.M. Box 136.

No. 20 Norfolk Street. Owned by estate of D. A. Buckley. Loss, $100. Insurance, $500. Occupied by J. K. Christie as restaurant. Loss, $106. Insurance, $1,200. Originated in a box of waste paper. Cause, unknown.

Sunday, March 2, 6.03 P.M. Box 113.

No. 1 Lowland Avenue. Owned by J. F. Silva. Loss, $72. Insurance, $1,000. Occupied by J. F. Silva as dwelling. Loss, $50. Insurance, $500. Originated on first floor. Cause, defective chimney.

Wednesday, March 5, 11.10 P.M. Box 271.

No. 2407–2405 Massachusetts Avenue. Owned by E. R. Dix. Loss, $160. Insurance, $642. Occupied by E. R. Dix as hardware. Loss, $100. Insurance, $500. No. 2405 occupied by F. S. Glynn as bicycle repairs. Loss, $65. Insurance, $273. Occupied by Edward Grant as jeweller. Loss, $35. Insurance, $265. Originated in the cellar. Cause, incendiary.

Friday, March 7, 11.52 A.M. Box 135.

No. 342 Broadway. Owned by R. T. Howes. Loss, $25. Insurance, $3,000. Occupied by C. D. Sullivan as dwelling. Loss, $33. Insurance, $1,500. Originated in the basement. Cause, oil heater taking fire.

Thursday, March 13, 7.08–7.13 P.M. Boxes 47 and 46.

No. 3 Hancock Park. Owned by G. H. Reed, trustee. Loss, $650. Insurance, $4,000. Occupied by E. F. Bragg as dwelling. Loss, $1,000 Insurance, $1,000. No. 1 Hancock Park Owned by P. S Mabille as dwelling. Loss, $155. Insurance, $5,000. Cause, careless dropping of a lighted match.

Saturday, March 15, 10.33 A.M. Box 27.

No 168 Harvard Street. Owned by William Campbell as dwelling. No loss. Cause, soot in chimney afire.

Saturday, March 15, 11.34 A.M. Box 74.

Rindge Avenue. Cause, burning grass in cemetery. Alarm needless

Saturday, March 15, 11.55 A.M. Box 116.

No. 124 Munroe Street. Owned by estate of George Fisher as dwelling. Loss, $50. Insurance $1,500. Originated on the roof. Cause, sparks from burning rubbish.

Monday, March 17, 3.35 A.M. Still.

No. 265 Third Street. Owned and occupied by G. F. Blake Manufacturing Co. as foundry. Loss, $1,500. Insurance, $1,500. Originated in roof of core oven. Cause, overheated.

Tuesday, March 18, 7.55 P. M. Still.

No. 15 Third Street. Owned by J. L. Bailey as dwelling. No loss. Cause, soot in chimney afire.

Wednesday, March 26, 7.15 A. M. Still.

No 29 Follen Street. Owned by C. H. Moore as dwelling. No loss. Cause, soot in chimney afire.

Wednesday, March 26, 8.15 A. M. Still.

No. 62 Brattle Street. Owned by Richardson heirs as dwelling. No loss. Cause, soot in chimney afire.

Thursday, March 27, 8.35 A. M. Still.

No. 385 Harvard Street. Owned by S. W. Hanks as dwelling. No loss. Cause, soot in chimney afire.

APRIL.

Tuesday, April 1, 9.15 P. M. Still.

No. 7 Kirkland Street. Owned by C. F. Batchelder Loss, $22. Insurance, $8,000. Occupied by C. F. Batchelder as dwelling. Loss, $18. Insurance, $18,000. Cause, curtain ignited by gas jet.

Wednesday, April 2, 1.26 P. M. Box 9.

No. 175 Cambridge Street. Owned by J. L. Bailey. Loss, $100. Insurance, $400. Occupied by J. L. Bailey as office. Loss, $40. Insurance, $200. Cause, oil stove taking fire.

Thursday, April 3, 3.32 P. M. Box 65.

No. 34 Hudson Street. Owned by E. M. Dempsey. Loss, $479. Insurance, $2,000. Occupied by E. M. Dempsey as dwelling. Loss, $300. Insurance, $300. Cause, defective chimney.

Thursday, April 3, 7.40 P M. Still.

Potter Street. Cause, burning rubbish on dump.

Saturday, April 5, 4.10 P.M. Still.

No. 181 Putnam Avenue. Owned by John McDonald. Loss, $25. Insurance, $4,000. Occupied by James McDonald as dwelling. Loss, $30. Insurance, $1,000. Cause, dropping of a lighted oil lamp

Wednesday, April 16, 2.33 A.M. Box 36.

No. 653 Massachusetts Avenue. Owned by C. H. Pratt. Loss, $1,891. Insurance, $19,000. Occupied by H. L. Smith as shoe store. Loss, $6,000. Insurance, $7,000. No. 649, occupied by C. H. McClare as architect. Loss, $426. Insurance, $500. Occupied by H. B Howlett as office. Loss, $150. Insurance, $150. No. 655, occupied by Edward Thorndike as apothecary. Loss, $50. Insurance, $1,000. Originated in a closet under the stairs in shoe store. Cause, unknown.

Wednesday, April 16, 10.15 A M. Still.

No. 14 Boylston Street. Occupied by A. H. Ricker as plumber. Loss, $20. Insurance, $500. Originated in oakum in the cellar. Cause, spark from hot iron.

Friday, April 18, 3.39 P.M. Box 134.

No 197 Elm Street. Owned by Edward Kennedy. Loss, $10. Insurance, $800. Occupied by James Daley as dwelling. Loss, $20. Insurance, $500. Originated in a bedroom on second floor. Cause, unknown.

Saturday, April 19, 4 P M Still.

No. 414 Main Street. Occupied by Hugh Stewart & Co. as carriage factory. Loss, slight. Originated in a pile of manure on outside of building. Cause, unknown.

Friday, April 25, 8.28 P.M. Box 23.

No. 2 Cottage Court. Owned by E. J. Dolan. Loss, $3. Insurance, $400. Occupied by J. W. Simpson as dwelling. Loss, $30. Insurance, $800. Originated in old rubbish in the cellar. Cause, unknown.

Tuesday, April 29, 1.59 A. M. Box 32.

No. 292 Webster Avenue. Occupied by Michael Duff as dwelling. Loss, slight. Originated in the attic. Cause, upsetting of a lighted lamp.

Wednesday, April 30, 12.20 P. M. Still.

No. 2 Scott Street. Occupied by S. J. Fowler as dwelling. No loss. Cause, soot in chimney afire.

Wednesday, April 30, 8 P. M. Still.

No. 1302 Cambridge Street. Owned by Prescott Keys. Loss, $175. Insurance, $2,500. Occupied by J. J. Donovan as dwelling. No loss. Cause, defective chimney.

MAY.

Thursday, May 1, 12.49 A. M. Box 59.

No. 22–24 Brattle Street. Owned by Gregory estate. Loss, $1,450. Insurance, $11,500. Occupied by W H. Gwynne & Co. as stable. Loss, $100. No insurance. Originated in the hay loft. Cause, supposed that it was struck by lightning.

Thursday, May 1, 3 52 P. M. Box 137.

No. 4 Sands Street. Owned by J. F. Murray. Loss, $12. Insurance, $5,000. Occupied by Matilda McIver as dwelling. Loss, trifling. Originated in a clothes closet. Cause, unknown.

Thursday, May 1, 8.10 P. M.. Still.

No. 33 Pioneer Avenue. Occupied by Bartholomew Kilkelly as dwelling. Loss, trifling. Cause, overturning of a lighted oil lamp.

Friday, May 2, 6.10 A. M. Still.

Broad Canal. Schooner Mabel E. Goss. Loss, trifling. Originated in floor under hoisting engine. Cause, overheated.

Tuesday, May 6, 4.05 P. M. Still.

No. 2072 Massachusetts Avenue. Occupied by O. E. Smith as gents furnishings. No loss. Cause, oil stove taking fire.

Friday, May 9, 12.07 A. M. Box 32.

Foot of Winsor, Somerville. Occupied by G. W. Norton as soap manufactory. Assistance rendered.

Friday, May 9, 9.20 A. M. Box 153.

Foot of Dunster Street. Occupied by Bay State Fuel Co. as coal shed. Loss, trifling. Originated on roof. Cause, sparks from dump fire.

Friday, May 9, 10 A. M. Still

First Street. Cause, burning rubbish on dump.

Friday, May 9, 6.17 P. M. Box 45.

No. 22 Soden Street. Owned by E. W. Tracy as dwelling. No loss. Originated in rubbish in the cellar. Cause, unknown.

Sunday, May 11, 4 58 P. M. Box 126.

No 134 Pine Street. Cause, barrel of rubbish in yard afire.

Sunday, May 11, 9.50 P. M. Box 53.

No. 98 Dunster Street. Owned by Patrick McElearney as stable. No loss. Cause, supposed of incendiary origin.

Wednesday, May 14, 12.30 A. M. Still.

No 54 Highland Street. Occupied by Sarah Toppan as dwelling Loss, trifling. Originated in the cellar. Cause, painters oiled rags taking fire.

Wednesday, May 14, 9.45 P. M. Box 93.

No. 618 Huron Avenue. Occupied by Mrs. John Mahady as dwelling. Loss, trifling. Originated in the attic. Cause, upsetting of a lighted oil lamp.

Saturday, May 17, 2.39 P. M. Box 14.

No. 119 Gore Street. Owned by Felix Conlon as dwelling. Loss, trifling. Originated in rubbish under porch. Cause, children and matches.

Monday, May 19, 4.47 P. M. Box 46.

No. 85 Hancock Street. Owned by A. A. Spencer. Loss, $223. Insurance, $5,000. Occupied by A. A. Spencer as dwelling. Loss, $50. Insurance, $2,000. Originated in rubbish barrel in the cellar. Cause, unknown.

Monday, May 19, 6.20 P. M. Box 126.

No. 72 School Street. Occupied by W. B. Reed as dwelling. Loss, $50. No insurance. Originated in a lounge. Cause, careless use of a lighted match.

Tuesday, May 20, 1.48 P. M. Box 73.

No. 8 Clifton Street. Occupied by Joseph Beaubou as shed. No loss. Originated in a rubbish barrel. Cause, unknown.

Tuesday, May 20, 6.10 P. M. Still.

No. 49 Harvard Street. Occupied by Bay State Metal Works. No loss. Originated in the roof. Cause, overheated smoke stack.

Thursday, May 22, 9.07 P. M. Box 26.

No. 43 School Street. Occupied by T. W. Killeweay as dwelling. Loss, slight. Cause, overturning of a lighted lamp.

Friday, May 23, 12.30 P. M. Box 9.

No. 23 Otis Street. Occupied by John Quin & Son as carpenters and builders. No loss. Originated in shaving bin. Cause, supposed by spontaneous combustion of oiled waste.

Tuesday, May 27, 12.46 A. M. Box 413.

No. 146 Sixth Street. Cause, false alarm given by some malicious person.

Thursday, May 29, 7.55 P. M. Still.

No. 53 Garden Street. Occupied by Cedric Laighton as dwelling. No loss. Cause, soot in chimney afire.

Friday, May 30, 3.21 A. M. Box 16.

No. 5 Harvard Street. Owned by Boston Elevated Railway Co. Loss, $2,750. Insurance, $6,000. Occupied by National Biscuit Co as store-house. Loss, $14,000. Insurance, $27,000. Occupied by Nu-Broom Co. Loss, $1,867. Insurance, $2,000. No. 365 Main Street. Occupied by H. F. Sanborn as hay and grain. Loss, $100. Insurance, $500. Originated in Biscuit Company's store-house. Cause, supposed by spontaneous combustion.

Saturday, May 31, 11.20 A. M. Box 9

No. 34 Cambridge Street. Owned by H. F. Gates as blacksmith shop, Loss, $60. Insurance, $400. Originated on the roof. Cause, sparks from a chimney.

JUNE.

Monday, June 2, 5.33 P. M. Box 151.

No. 342 Harvard Street. Owned by Walter Culley as dwelling. Loss, trifling, Originated in the hall. Cause, defective gas fixture.

Monday, June 2, 6.02 P. M. Box 68.

Rear, No. 11 Richdale Avenue. Owned by H. B. Adams as stable. No loss. Originated in packing boxes on outside of building. Cause, set afire by children.

Monday, June 2, 8.18 P. M. Box 169.

No. 15 Yerxa Road Occupied by I. A. McLean as dwelling. Loss, $5. Insurance, $1,000. Originated on second floor. Cause, curtain in contact with gas jet.

Monday, June 2, 10.03 P. M. Box 29.

No. 13 Vandine Street. Occupied by John Caldwell as dwelling. Loss, trifling. Cause, explosion of lighted oil lamp.

Tuesday, June 3, 1.58 P. M. Box 7.

Prison Point Street. Owned by J. S. Pratt & Son as wagon load of hemp. Cause, sparks from driver's pipe.

Wednesday, June 4, 4.33 P M. Box 39.

Gordon Place. Owned by Soule & Dillingham. Loss, $234. Insurance, $500. Occupied by H. H. Brandt as painter. Loss, $236. Insurance, $400. Cause, spontaneous combustion

Thursday, June 5, 3.14 P. M. Box 9.

No. 6 East Street. Owned by Ellen Hawks as dwelling. Loss, slight. Originated on the roof. Cause, sparks.

Thursday, June, 5 8 21 P. M. Box 26.

No. 708 Main Street. Owned by Allen & Endicott Building Association as engine room. Loss, $50. Insurance, $500. Originated in shavings on roof. Cause, sparks.

Friday, June 6, 4 A. M. Still.

No. 291 Cambridge Street. Occupied by C. E. McCarthy as barber Loss, slight. Cause, lighted gas, under water-tank, igniting wood work.

Friday, June 6, 2.49 P. M Box 36.

No 594 Massachusetts Avenue. Owned by C. H. Pratt. Loss, $73. Insurance, $4,000. Occupied by Arthur Smith as fruit store. Loss, $500. Insurance, $2,500. Cause, gas explosion.

Saturday, June 7, 2.08 P. M. Box 32.

No. 403 Columbia Street. Owned by Fanny Frankenstein as shed. Loss, slight Originated on outside of building Cause, children and matches.

Sunday, June 8, 9.20 P. M. Box 271.

No 15 Harvey Street. Occupied by John Tisdale as dwelling No loss. Originated in ash barrel. Cause, hot ashes.

Tuesday, June 10, 12.55 P. M. Still.

Charles River Road. Cause, burning rubbish on dump.

Tuesday, June 10, 7.05 P. M. Still.

No. 12 Eliot Street. Owned by M. J. Packard. Loss, $27. Insurance, $3,000. Occupied by M. J. Packard as boarding house Loss, $127. Insurance, $1,000. Originated in a closet on third floor. Cause, boy with lighted lamp.

Wednesday, June 11, 4.50 P. M. Still.

Spring Street. Cause, burning rubbish on dump.

Wednesday, June 11, 11.35 P. M Box 34.

No. 262 Columbia Street. Owned by B. R. Wilson. Loss, $133. Insurance, $1,250. Occupied by Henry Morris as dwelling. Loss $50. No insurance. Cause, explosion of a lighted oil lamp.

Thursday, June 12, 6.30 P. M. Box 32.

Cambridge Street. Cause, false alarm, given by a malicious boy.

Thursday, June 12, 10.46 P. M. Box 17.

No. 1 Rogers Court. Occupied by Margaret McCabe as dwelling. Loss, slight. Cause, lighted candle on table burning down and setting cloth afire.

Saturday, June 14, 7 09 P. M. Box 126.

No. 13 Pine Street. Occupied by George Jones as dwelling. Loss slight. Cause, upholstering on a chair ignited by a lighted match.

Monday, June 16 1.02 A. M. Box 1.45.

Bay Street. Cause, false alarm given by some malicious person.

Tuesday, June 17, 10.30 A. M. Still.

No. 323 Broadway Owned by H. J. Bushway as dwelling. Loss, slight. Originated on outside of building. Cause, painters torch.

Tuesday, June 17, 8.09 P. M. Box 43.

No. 26 Surry Street. Owned by J. H. Lally as stable. Loss, $15. Insurance, $500. Originated on the roof. Cause, fireworks.

Tuesday, June 17, 8.47 P. M. Still.

No. 223 Bridge Street. Occupied by J. M. Wood & Co. as drying room. Cause, steam mistaken for fire.

Wednesday, June 18, 9.15 A. M. Box 35.

Norfolk Place. Owned by A. C. Lamson as shed. No loss. Originated on outside of building. Cause, children and matches.

Thursday, June 19, 12.43 A. M. Box 429.

No. 181 Clark Street. Occupied by Timothy McAvoy as dwelling. Loss, $20. No insurance. Originated in a window curtain in attic. Cause, unknown.

Thursday, June 19, 3 55 A. M. Box 82

No. 167 Brattle Street. Owned by S. H. Swan Loss, $1,235. Insurance, $25,000. Occupied by W. D. Swan as dwelling. Loss, $70. Insurance, $4,000. Originated in a closet. Cause, spontaneous combustion of oiled floor clothes.

Friday, June 20, 9.26 A. M. Box 52.

No. 1116 Massachusetts Avenue. Owned by M. J. Conry. Loss, $238 Insurance, $8,000. Occupied by W. J. Coveny as upholstering. Loss, $550. Insurance, $1,000. Originated in workroom in the basement. Cause, explosion of oil lamp under glue pot.

Friday, June 20, 11.41 A. M. Box 134.

No. 79 A Tremont Street. Owned by S. P. Barton. Loss, $108. Insurance, $3,000. Occupied by W. J. Dutra as dwelling. Loss, $80. Insurance, $300. Cause, child and matches.

Friday, June 20, 10.50 P M. Still.

No. 301 Broadway. Owned by Henry Wade. Loss, $6. Insurance, $2,000. Occupied by L. A. Maskell as dwelling. No loss. Cause, lighted lamp left under the stairs igniting woodwork.

Tuesday, June 24, 12.15 P. M. Still.

No. 16 Tuttle Street. Occupied by Gus Peterson as dwelling. No loss. Cause, soot in chimney afire.

Tuesday, June 24, 5.03 P. M. Box 16.

No. 1 Pelham Street. Owned by M. J. Walsh as dwelling. Loss, $30. Insurance, $1,500. Originated on the roof. Cause, sparks from a chimney.

Tuesday, June 24, 7.51 P. M. Box 32.

No. 327 Webster Avenue. Occupied by Jacob Andleman as grocery. No loss. Cause, falling of a lighted hanging lamp.

Wednesday, June 25, 10.15 A. M. Still.

No. 7 Brattle Street. Occupied by A. J. Bloom as tailor. No loss. Originated in water closet in basement. Cause, dropping of lighted match into paper.

Wednesday, June 25, 1.03 P. M. Box 14.

No. 162 Otis Street. Owned by Daniel Geary as dwelling. Loss, slight. Originated in rubbish under the outside steps. Cause, children and matches.

Thursday, June 26, 12.55 A. M. Still.

No. 2 Winter Street. Owned by Charles Linehan as dwelling. Loss, slight. Cause, boys playing with fire.

Thursday, June 26, 4.13 P. M. Box 42.

No. 11 Elmer Street. Cause, smoke mistaken for fire.

Friday, June 27, 4.20 P. M. Still.

No. 8 Howard Street. Owned by F. O. White as dwelling. Loss, $20. Insurance, $2,200. Originated on the roof. Cause, sparks from steam road-roller.

Monday, June 30, 11.20 A. M. Box 116.

No. 157 Main Street. Occupied by Bay State Fuel Co. as coal shed. Loss, slight. Originated on the roof. Cause, sparks from hoisting engine.

JULY.

Thursday, July 3, 10.39 P. M. Box 178.

Garden Street. Owned by E. A. Foster as an old dilapidated building. Loss, trifling Cause, incendiary.

Friday, July 4, 1.47 P. M. Box 71.

No. 14 Clarendon Avenue. Occupied by Frank Stiff as dwelling. Loss, $43. Insurance, $500. Originated in a box of fireworks. Cause, sparks from fireworks.

Saturday, July 5, 12.02 A. M. Box 25.

No. 829 Main Street. Owned by G. F. and H M. Leonard. Loss, $512. Insurance, $13,000. Occupied by Jacob Charak as variety store. Loss, $1,506. Insurance, $3,000. Originated in toilet room. Cause, unknown.

Saturday, July 5, 10.55 P. M. Still.

No. 44 Porter Street. Owned by W. F. Carroll as dwelling. No loss. Cause, soot in chimney afire.

Sunday, July 6, 4.43 P. M. Box 84.

Vassal Lane. Occupied as brick-yard. Cause, smoke from kiln mistaken for fire.

Monday, July 7, 6.31 A. M. Box 26.

No. 78 State Street. Owned by Blacker & Shephard as planing mill. Loss, slight. Originated on the roof. Cause, sparks from chimney.

Monday, July 7, 8.01 A. M. Box 12,

No. 12 Winter Street. Ash barrel in yard afire. Cause, hot ashes.

Thursday, July 10, 3.11 P. M. Box 15.

No. 123 Spring Street. Occupied by J. M. Medeiros as dwelling. No loss. Cause, lighted oil stove falling from a bench.

Thursday, July 10, 6.05 P. M. Still.

No. 33 Warren Street. Occupied by Stephen French as dwelling. Loss, slight. Cause, lighted match igniting fringe on lounge.

Friday, July 11, 2.16 P. M. Box 32

No. 950 Cambridge Street Owned by Albert Briggs as dwelling. No loss. Cause, rubbish in cellar set afire by a boy.

Monday, July 14, 9.15 P M. Box 131.

No. 726 Cambridge Street. Owned by Lena Grossman. Loss, $30. Insurance, $4,000. Occupied by Lena Starnfield as millinery Loss, $700. Insurance, $2,000. Cause, unknown.

Tuesday, July 15, 12.40 P. M. Box 53.

Foot of Dunster Street. Owned by Harvard College as coal shed. Loss, trifling. Originated on roof. Cause, sparks from burning rubbish on dump.

Tuesday, July 15, 2.39 P. M. Box 422.

No. 168 Main Street. Occupied by Edward Kendall & Sons as boiler works. Loss, trifling. Cause, fire dropping into tank of asphalt.

Saturday, July 19, 10.34 P. M. Box 271.

No. 11 Cedar Street. Owned by Alexander McPhee. Loss, $150. Insurance, $700. Occupied by Alexander McPhee as dwelling. Loss, $325. Insurance, $1,500. Originated in an unfinished attic. Cause, unknown.

Sunday, July 20, 9.32 P. M. Box 7.

Prison Point Street. Owned by Boston & Maine Railroad Co. as passenger car. Loss, slight. Cause, escaping gas from a tank ignited by a torch.

Tuesday, July 22, 9.20 A. M. Box 431.

No. 99 Crescent Avenue. Occupied by A. H. Hews & Co. as earthen ware manufactory. Loss, $476. Insurance, $476. Originated in drying-room. Cause, spontaneous combustion of oily waste.

Tuesday, July 22, 10.45 P. M. Box 116.

No. 10 Broadway. Occupied by Joanna Hughes as boarding house. Loss, $25. Insurance, $1,000. Cause, smoking in bed

Saturday, July 26, 4.12 P. M. Box 162.

No 4 Bradbury Street. Occupied by B. S. Grant as dwelling. No loss. Cause, upsetting of an oil stove.

Wednesday, July 30, 3 A. M. Box 137.

No. 9 Howard Street. Owned by W. J. Heron as toolhouse. Loss, $50. No insurance. Cause, incendiary.

Wednesday, July 30, 10.07 P. M. Box 9.

No 149 Cambridge Street. Occupied by T. H McManus as dwelling. Loss, trifling. Originated in hall. Cause, explosion of oil lamp.

AUGUST.

Sunday, Aug. 3, 5.28 P. M. Box 32.

No. 244. Webster Avenue. Occupied by Jacob Andelman as dwelling. Loss, slight. Cause, oil stove taking fire.

Monday, Aug. 4, 5.01 P. M. Box 112.

No. 177 Bridge Street. Cause, smoke mistaken for fire.

Thursday, Aug. 7, 12.37 P. M. Box 162.

No. 23 Sparks Street. Cause, smoke mistaken for fire.

Thursday, Aug 7, 2.45 P. M Still.

No. 833 Main Street. Occupied by Isaac Katz as dwelling. No loss. Originated on second floor. Cause, child playing with matches.

Friday, Aug. 8, 8.55 A. M. Box 35.

No. 164 Norfolk Street. Owned by Rufus Lamson estate. No loss. Occupied by W. B. Shay as carpenter. Loss, $200. Insurance, $500. Originated under a work-bench. Cause, unknown.

Saturday, Aug. 9, 8.24 A. M. Box 15.

No. 223 Vine Street. Occupied by E. C. Brogan as dwelling. Loss, $20. No insurance. Originated in a bed in the attic. Cause, unknown.

Saturday, Aug. 9, 12.17 P. M. Box 17.

Rear No. 15 Washington Street. Owned and occupied by J. A. McIsaac as woodworking mill. No loss. Originated under stairs on first floor. Cause, unknown.

Saturday, Aug. 9, 8.37 P. M. Box 71.

Newman Street Cause, smoke mistaken for fire.

Wednesday, Aug. 13, 2.43 A. M. Still.

No. 538 Main Street. Occupied by Ivers & Pond Piano Co. No loss. Originated in sawdust in boiler-room. Cause, sparks from furnace.

Thursday, Aug. 14, 5.21 P. M. Box 131.

No. 24 Marion Street. Owned by Thomas Harrigan. Loss, $75. Insurance, $3,000. Occupied by Jeremiah Murphy as dwelling. Loss, $25. No insurance. Originated in a lounge. Cause, unknown.

Friday, Aug. 15, 11.30 A. M. Box 41.

No. 15 Andrew Street. Owned by F. K. Burrage as dwelling. Loss, trifling. Originated on the roof. Cause, sparks from chimney.

Saturday, Aug. 16, 6.36 P. M. Box 43.

No. 5 Flagg Street Court. Occupied by G. F. Richards as dwelling. Loss, slight. Cause, oil stove taking fire.

Sunday, Aug. 17, 6.50 P. M. Still.

No. 23 Gore Street. Occupied by Fannie Finkelstein as variety store. Loss, slight. Cause, lighted lamp igniting mosqueto netting.

Monday, Aug. 18, 12.30 A. M. Box 71.

Magoun Street. Owned by Samuel Potter as old lumber on vacant lot. Loss, trifling. Cause, incendiary.

Monday, Aug. 18, 4.31 P. M. Box 15.

No. 303 Vine Street. Owned by Hugh Doherty as dwelling. Loss, trifling. Originated on outside of buildlng. Cause, children playing with fire.

Wednesday, Aug. 20, 10.20 P. M. Still.

No. 86 School Street. Owned by J. G. Ball as dwelling. Loss, slight. Originated on the roof. Cause, sparks from chimney.

Saturday, Aug. 23, 9.04 A. M. Box 29.

No. 14 Berkshire Street. Owned by Edmund Dwyer. Loss, $25. Insurance, $900. Occupied by James McGlynn as dwelling. Loss, $10. No insurance. Originated in attic. Cause, rats and matches.

Sunday, Aug. 24, 8.29 P. M. Box 126.

No. 34 Pine Street. Occupied by Anni Jones as dwelling. Loss, trifling. Originated in bedroom. Cause, breaking of lighted oil lamp.

Tuesday, Aug. 26, 7.15 P. M. Box 139.

No. 518 Putnam Avenue. Occupied by E. J. De Frondat as dwelling. Loss, trifling. Originated in a comforter on the roof. Cause, sparks from chimney.

Saturday, Aug. 30, 9.45 P. M. Still.

No. 15 State Street. Occupied by L. Kelley as dwelling. Loss, trifling. Cause, overturning of lighted oil lamp.

Sunday, Aug. 31, 7.10 P. M. Still.

No. 9 Fayerweather Street. Originated in switch-box on electric wire pole.

SEPTEMBER.

Wednesday, Sept. 3, 7 28 A. M. Box 175.

No. 26 Hubbard Avenue. Owned by J. J. Ivester. Loss, $18. Insurance, $2,500. Occupied by J. J. Ivester as dwelling. Loss, $10. Insurance, $500. Originated in the basement. Cause, oil stove taking fire.

Wednesday, Sept 3, 11 35 A. M. Box 43.

No. 133 Banks Street. Owned by J. O. Bullard as dwelling. Loss, trifling. Originated on the roof. Cause, sparks from chimney.

Wednesday, Sept 3. 3 05 P. M. Still.

No 1014 Cambridge Street. Owned by J. M. Fineberg as dwelling. Loss, trifling. Originated on the roof. Cause, sparks from chimney

Wednesday, Sept. 3, 6.32 P. M. Box 422.

No. 168 Main Street. Owned and occupied by Edward Kendall & Sons as boiler-works. Loss, $3,925 Insurance, $84,600. Originated in riveting tower. Cause, hot coals from forge.

Saturday, Sept. 6, 12.10 P. M. Box 424.

Erie Street. Owned by Nixon & Gordon as unoccupied dwelling. Loss, $315. Insurance, $1,000. Originated on the roof. Cause, sparks from burning rubbish in the street.

Saturday, Sept. 6, 2.22 P. M. Box 32.

No. 1074 Cambridge Street. Owned by Mary Daley. Loss, trifling. Occupied by Freeman Brothers as tailors. Loss, $223. Insurance, $1,000. Cause, supposed by a lighted cigar stub igniting paper.

Wednesday, Sept. 10, 11.40 A. M. Box 14.

No. 455 Cambridge Street. Owned by J. H. McCormack. Loss, $30. Insurance, $2,250. Occupied by S. Leibowitz as jeweler. Loss, $550. Insurance, $1,000. Originated under the counter. Cause, unknown.

Wednesday, Sept. 10, 3.32 P. M. Box 115.

No. 229 Third Street Owned by Eugene McCarthy as dwelling. Loss, slight. Originated on outside of building. Cause, children playing with fire.

Thursday, Sept. 11, 10.24 P. M. Box 26.

No. 28 Osborn Street. Owned by Howe heirs as unoccupied shed. No loss. Cause, incendiary.

Monday, Sept. 15. 2.25 P. M. Still.

No. 375 Green Street. Occupied by G. H. Hughes as painter. Loss, slight. Cause, ignition of boiling wax.

Monday, Sept 15, 6.27 P. M. Box 28.

No. 107 Harvard Street. Occupied by Lever Brothers as soap manufactory. Loss, trifling. Originated on roof. Cause, overheated smoke pipe.

Tuesday, Sept. 16, 4.45 P. M. Box 53.

No. 57 Plympton Street. Owned by Charles Moore as dwelling. Loss, $60. Insurance, $2,500. Originated in the wood-shed. Cause, boys and matches.

Wednesday, Sept. 17, 4 P. M. Still.

No. 54 Garden Street. Occupied by Parsons sisters as dwelling. No loss. Cause, oil stove taking fire.

Thursday, Sept. 18, 6.41 P. M. Box 41.

No. 21 Andrew Street. Occupied by William Eagleston as dwelling. No loss. Originated in the cellar. Cause, overturning of a lighted lamp.

Saturday, Sept. 20, 4.40 A. M. Box 115.

Munroe Street. Owned by W. S. Moore & Co. Loss, $1,500. Insurance, $2,000. Occupied by W. S. Moore & Co. as stable. Loss, $170. Insurance, $1,500. Originated in the loft. Cause, supposed by rats and matches.

Wednesday, Sept. 24, 9.29 A.M. Box 175.

No. 19 Crescent Avenue. Owned by J. K. Abbot as dwelling. Loss, trifling. Originated on the roof. Cause, sparks

Friday, Sept. 26, 2.21 P. M. Box 113.

No. 46 Second Street. Occupied by Mary Saluto as dwelling. Loss, trifling. Originated in a lounge. Cause, child and matches.

OCTOBER.

Friday, Oct. 3, 4.08 P. M. Box 136.

Nos. 544–550 Massachusetts Avenue. Owned by C. R Lamb. No fire. Cause, collapse of a building being remodeled.

Saturday, Oct. 4, 8.36 P. M. Box 43.

No. 6½ Grant Street. Owned by Fallon heirs. Loss, $30. No insurance. Occupied by Fallon heirs as dwelling. Loss, $50. No insurance. Originated in an attic chamber. Cause, upsetting of a lighted oil lamp.

Monday, Oct. 6, 11.31 P. M. Box 115.

No. 212 Vine Street. Owned by R. H. Gove. Loss, $285. Insurance, $1,000. Occupied by R. H. Gove as bakery. Loss, $50. Insurance, $600. Cause, accumulation of gas in oven exploding.

Tuesday, Oct. 7, 7.52 P. M. Box 139.

No. 202 Hamilton Street. Owned by C. D. Ellis. Loss, $20. Insurance, $2,500. Occupied by J. H. Worden as dwelling. Loss, $150. Insurance, $1,000. Originated in a bedroom. Cause, unknown.

Tuesday, Oct. 7, 8.32 P. M. Box 38.

No. 167 Pearl Street. Owned by A. B. Eustice. Loss, $88. Insurance, $4,000. Occupied by J. T Stinson as grocery. Loss, $135. Insurance, $800. Cause, falling of a lighted hanging oil lamp.

Thursday, Oct. 9, 1.05 P. M. Still.

West Boston Bridge. Cause, chaff on planking afire. No loss.

Friday, Oct. 10, 11.56 A. M. Still.

Charles River Road. Cause, burning rubbish on dump.

Saturday, Oct 11, 6 P. M. Still.

No. 1361 Cambridge Street. Owned by Heirs of C. N. Mellen. Loss, $84. Insurance, $3,000 Occupied by Gallagher & Baxter as bicycles, and repairers of. Loss, $300. Insurance, $1,000. Cause, ignition of a pot of gasoline.

Sunday, Oct. 12, 1.03 A. M. Box 178.

No. 14 Sherman Street. Owned by J. H. Brogan. Loss, $85. Insurance, $1,400. Occupied by J. H. Brogan as dwelling. Loss, $35. Insurance, $500. Cause, lighted pipe in coat pocket.

Monday, Oct. 13, 5.56 A. M. Box 116.

No. 354 Third Street. Occupied by Cambridge Gas Light Co. as coal-shed. Loss, $200. No insurance. Cause, spontaneous combustion of coal.

Monday, Oct. 13, 6 09 P. M. Box 41.

No. 75 Pleasant Street. Occupied by J. P. Jones as dwelling. No loss. Cause, upsetting of lighted oil lamp.

Monday, Oct 13, 9 47 P. M. Box 17.

No. 134 Washington Street. Owned by C. F. McClure. Loss, $29. Insurance, $1,400. Occupied by C. M. Thompson as dwelling. Loss, $50. No insurance. Cause, explosion of a kerosene oil lamp

Tuesday, Oct. 14, 11.23 A .M. Box 271.

No. 41 Harvey Street. Owned by Michael O'Keefe. Loss, $25. Insurance, $2,500. Occupied by M. E O'Keefe as dwelling. Loss, $94. Insurance, $200. Originated in a bedroom on third floor. Cause, unknown.

Tuesday, Oct. 14, 12.23 P. M. Box 8.

No. 62 First Street. Occupied by C. E. Hall & Co. as marble workers. Loss, $600. Insurance, $22,500. Originated in the office. Cause, supposed by the dropping of a lighted match into paper

Wednesday, Oct. 15, 1.47 P. M. Box 53.

Charles River Road. Cause, burning rubbish on dump.

Friday, Oct. 17, 4.20 P M. Still.

No. 21 Cragie Street. Owned by J. B. Bouton as dwelling. No loss. Cause, soot in chimney afire.

Friday, Oct. 17, 6 28 P. M. Still.

No. 21 Cragie Street. Owned and occupied by J. B. Bouton as dwelling. Loss, trifling. Originated in kindling wood. Cause, sparks from furnace.

Saturday, Oct. 18, 4 08 P. M. Box 41.

No. 14 Laurel Street. Owned by M. A Murphy as dwelling. Loss, $15. Insurance, $1,200. Originated on the roof. Cause, sparks from a chimney.

Monday, Oct 20, 4.15 P. M. Still.

Rear of Tannery Street. Owned by Cambridge Home as manure pile. Loss, slight. Cause, set afire by boys.

Monday, Oct. 20, 7.36 P. M. Box 178.

No. 12 Garden Street. Owned by Arthur Blennerhasett. Loss, $13. Insurance, $2 000. Occupied by Mary Finnick as dwelling. Loss, trifling. Originated in a bedroom on second floor. Cause, unknown.

Tuesday, Oct. 21, 2 27 P. M. Box 17.

No. 123 Hastings Street. Owned by Mary Flannagan as dwelling. Loss, slight. Originated on the roof. Cause, sparks from a chimney.

Wednesday, Oct. 22, 6.27 P. M Box 131.

No. 783 Cambridge Street. Owned by M. A. Brogan as shed. No loss. Cause, hot ashes in a barrel.

Friday, Oct. 24, 12.14 P. M. Box 234.

No. 196 Prospect Street. Owned by L. F. Baldwin as dwelling. Loss, $42. Insurance, $3,500. Originated in the cellar Cause, supposed by rats and matches.

Monday, Oct. 27, 6 18 P. M. Box 32.

Cambridge Street. Cause, false alarm given by a malicious boy.

Tuesday, Oct 28, 9.50 A M. Still.

No. 88 Austin Street. Occupied as dwelling. Cause, soot in chimney afire.

Tuesday, Oct. 28, 5.30 P. M Still.

No. 13 Prospect Street Owned by J. M. Robbins as dwelling. Cause, soot in chimney afire.

Thursday, Oct. 30, 12 30 P. M. Still.

No. 11 Hillside Avenue Occupied by Samuel Usher as dwelling. Cause, soot in chimney afire.

Thursday, Oct. 30, 5.58 P. M. Box 17.

No 35 Hastings Street. Occupied by Joseph Polas as dwelling. Loss, slight. Originated in the attic. Cause, oil heater taking fire.

Friday, Oct. 31, 5.54 P. M. Box 413.

Binney Street. Occupied by Boston Bridge Works. Loss, trifling. Originated in the roof. Cause, overheated smoke pipe.

NOVEMBER.

Saturday, Nov. 1, 2.24 A. M. Still.

No. 708 Main Street. Owned by Allen & Endicott Building Association as engine room. Loss, $50. Insurance, $500. Originated in shaving bin. Cause, spontaneous combustion.

Sunday, Nov. 2, 11.35 P. M. Still

No. 10 Oxford Street. Owned by A. M. Bowen. Loss, $75. Insurance, $7,000. Occupied by Elizabeth Cotter as dwelling. Loss, trifling. Originated in a barrel in the cellar. Cause, hot ashes.

Tuesday, Nov. 4, 12.50 P. M. Still.

No. 46 Dunster Street. Occupied by Signet Club. Loss, trifling. Originated in floor under the cooking range. Cause, overheated.

Wednesday, Nov. 5, 7.05 A. M. Box 413.

No. 125 Binney Street. Occupied by Alden Spear's Sons & Co. as laundry. No loss. Originated in oiled waste in engine room. Cause, spontaneous combustion.

Wednesday, Nov. 5, 7.38 P. M. Box 152.

No. 25 Quincy Street. Owned by Nathaniel Shaler as dwelling. No loss. Cause, soot in chimney afire.

Saturday, Nov. 8, 1.50 A. M. Box 26.

No. 708 Main Street. Owned by Allen & Endicott Building Association as engine-room. Loss, trifling. Originated in shaving room. Cause, spontaneous combustion.

Sunday, Nov. 9, 2.45 A. M. Still.

No. 35 Harvey Street. Owned by Maria Fietz as dwelling. Loss, trifling. Originated in woodwork around mantle. Cause, overheated.

Sunday, Nov. 9, 11.57 A. M. Box 15.

No. 339 Vine Street. Owned by M. G. Shaughnessy as dwelling. No loss. Cause, soot in chimney afire.

Monday, Nov. 10, 4 10 P. M. Still.

Murray Street. Cause, rubbish burning on dump.

Monday, Nov. 10, 5 P. M. Still.

No. 3 Hampshire Place. Occupied by John King as dwelling. Loss, trifling. Originated on third floor. Cause, explosion of a can of oil being used to light the fire. Mrs. King was fatally burned by her clothes catching fire.

Sunday, Nov. 16, 9.16 P. M. Box 14.

No. 44 Fifth Street. Occupied by Sarah Batchelder as dwelling. Loss, slight. Cause, oil stove taking fire.

Wednesday, Nov. 19, 2.25 P. M. Box 234.

No. 4 Summer Street. Owned by Leo Rhoda. Loss, $35. Insurance, $1,800. Occupied by L. H. Adams as dwelling. Loss, $50. Insurance, $1,000 Cause, overturning of an oil lamp.

Thursday, Nov. 20, 8.32 A. M. Box 26.

Albany Street. Owned and occupied by Geo. W. Gale Lumber Co. as planing mill. Loss, trifling. Originated in second floor. Cause, supposed by spontaneous combustion.

Thursday, Nov. 20, 12.14 P. M. Box 9.

No. 4 Cambridge Street Occupied by W. A. Bertsch as marble worker. No loss. Originated in blacksmith shop. Cause, sparks from forge.

Saturday, Nov. 22, 6.40 P.M. Still.

Sixth Street. Cause, rubbish burning on dump.

Sunday, Nov. 23, 12.03 P. M. Still.

No. 538 Main Street. Occupied by Ivers & Pond Piano Co. as drying-room. No loss. Cause, overheated.

Sunday, Nov. 23, 1 P. M. Box 89.

Niles Lane. Owned by Parry Brothers. Loss, $581. Insurance, $800. Occupied by Charles Bigoanette as dwelling. Loss, trifling. Originated on the roof. Cause, sparks from swamp fire.

Sunday, Nov. 23, 5.45 P.M. Still.

No. 1979 Massachusetts Avenue. Occupied by J. E. Somers as dwelling. No loss. Cause, soot in chimney afire.

Tuesday, Nov. 25, 3.17 P. M Box 9.

No. 7 Second Street. Owned by M. J. Burt. Loss, $150. Insurance, $2,000. Occupied by E R. Harden as dwelling. Loss, $30. No insurance. Originated in a bedroom. Cause, mice and matches.

Tuesday, Nov. 25, 4.45 P. M. Still.

No. 528 Massachusetts Avenue. Owned by A. P. Morse as dwelling. Loss, trifling. Originated on the roof. Cause, sparks from chimney.

Thursday, Nov. 27, 9 35 P. M. Still.

No. 91 Winter Street. Occupied by Charles McCarron as dwelling. No loss. Cause, explosion of an oil lamp.

Friday, Nov. 28, 12.02 P. M. Box 411.

No. 265 Third Street. Occupied by Geo F. Blake Manufacturing Co. as steam pumps. Loss, trifling. Originated in workmen's clothes locker. Cause, pipe in coat pocket.

CITY CLERK'S REPORT OF FEES AND LICENSES

OFFICE OF THE CITY CLERK,
December 1, 1902.

To the Honorable, the City Council of the City of Cambridge:—

The undersigned herewith presents an account of the sums received for fees and licenses during the year ending November 30, 1902.

Auctioneers' Licenses	$46 00
Pool, Bowling Alley and Billiard Licenses	72 00
Wagon and Carriage Licenses	216 00
Intelligence Office Licenses	44 00
Junk Store and Collectors' Licenses	596 00
Recording Mortgages, Assignments, etc.	497 95
Marriage Certificates	527 00
Certified Copies from Records	96 25
Fees from Dog Licenses	390 00
Fees from Liquor Licenses	58 00
Fees from Fireworks Licenses	120 00
Fees from Peddlers' Licenses	60 50
Sundries	60 98
Total	$2,784 68

The foregoing amount has been paid into the City Treasury.

The receipts from Dog Licenses have been $4,875.00. Of this amount, the City Clerk's fee (20 cents for each license issued), amounting to the sum of $390.00 is included in the above list of fees, and the balance, amounting to $4,485.00, has been paid the County Treasurer.

Respectfully submitted,

EDWARD J. BRANDON,
City Clerk.

REPORT OF THE SCHOOL COMMITTEE FOR 1902

In compliance with Section 45 of the Rules of the School Board, the Superintendent herewith submits his twenty-eighth annual report, it being for the year ending December 31, 1902:—

Population of Cambridge.

1875	47,838	1895	81,643
1885	59,658	1900	91,886
1902 (estimated)	94,152		

School Census.

Number of children in the City five years old or more, but less than fifteen.

1885 (taken in May)	10,957	1895 (taken in May)	12,869
1890 (taken in May)	11,971	1902 (taken in September)	15,587

Schools and Class Rooms.

Latin School	1	Class rooms in use	14
English High School	1	" " "	11
Manual Training School	1	" " "	8
Grammar Schools	7	" " "	93
Primary Schools	19	" " "	91
Grammar and Primary Schools	9	" " "	97
Kindergartens	14	" " "	14
Evening Drawing Schools	2	" " "	5
Evening High School	1	" " "	10
Evening Elementary Schools	4	" " "	21
Whole number of Day Schools			52
Number of class rooms for Day Schools			328

Number of Teachers in the Day Schools.

[Special teachers are included in the total.]

December	Latin School	English High School	Manual Training School	Grammar Schools	Primary Schools	Kindergartens	Total
1898	16	23	Became a public school Jan. 1, 1899	161	133	22	364
1899	19	23	14	170	138	24	396
1900	22	24	14	173	142	26	409
1901	22	24	14	177	143	25	413
1902	24	24	15	179	140	25	417

ATTENDANCE AT ALL THE DAY SCHOOLS.

Year	Number of Pupils Registered	Average Number Belonging	Average Daily Attendance	Per cent of Attendance
1898	15,026	12,907	11,978	92.8
1899	15,753	13,255	12,285	92.6
1900	16,203	13,816	12,684	91.8
1901	16,065	14,144	13,021	92.1
1902	16,341	14,244	13,215	92.8

ATTENDANCE AT THE LATIN SCHOOL.

Year	Number of Pupils Registered	Average Number Belonging	Average Daily Attendance	Per cent of Attendance
1898	398	362	343	94.7
1899	398	371	351	94.8
1900	430	404	385	95.2
1901	490	468	449	96.1
1902	488	465	441	95.1

ATTENDANCE AT THE ENGLISH HIGH SCHOOL.

Year	Number of Pupils Registered	Average Number Belonging	Average Daily Attendance	Per cent of Attendance
1898	773	685	662	96.7
1899	794	688	666	96.7
1900	572	514	491	95.6
1901	613	517	490	94.8
1902	577	498	464	93.1

ATTENDANCE AT THE MANUAL TRAINING SCHOOL.

Year	Number of Pupils Registered	Average Number Belonging	Average Daily Attendance	Per cent of Attendance
1900	212	192	183	95.5
1901	217	191	184	96.2
1902	254	242	229	94.4

ATTENDANCE AT THE GRAMMAR SCHOOLS.

Year	Number of Pupils Registered	Average Number Belonging	Average Daily Attendance	Per cent of Attendance
1898	6,570	5,883	5,548	94.3
1899	7,008	6,107	5,738	93.9
1900	7,192	6,295	5,891	93.6
1901	7,044	6,483	6,079	93.8
1902	7,359	6,711	6,316	94.1

Attendance at the Primary Schools.

Year	Number of Pupils Registered	Average Number Belonging	Average Daily Attendance	Per cent of Attendance
1898	6,505	5,429	4,984	91.8
1899	6,750	5,514	5,071	91.9
1900	6,888	5,788	5,267	91.0
1901	6,815	5,840	5,310	90.9
1902	6,687	5,708	5,249	92.0

Attendance at the Kindergartens.

Year	Number of Pupils Registered	Average Number Belonging	Average Daily Attendance	Per cent of Attendance
1898	780	548	441	80.4
1899	803	575	459	79.9
1900	909	623	467	74.9
1901	886	645	509	78.9
1902	976	620	516	83.2

Number of Pupils Admitted to the Lowest Grade of the Latin School.

Course, 5 years.

Year	Boys	Average Age	Girls	Average Age
1898	49	14 years 8 months	56	14 years 3 months
1899	58	14 years 5 months	51	14 years 4 months
1900	84	14 years 5 months	70	14 years 5 months
1901	57	14 years 6 months	58	14 years 2 months
1902	60	14 years 5 months	88	14 years 4 months

Number of Pupils Graduated from the Latin School.

Course, 5 years.

Year	Boys	Average Age	Girls	Average Age
1898	16	18 years 1 month	27	18 years 3 months
1899	16	18 years 3 months	27	18 years 5 months
1900	20	18 years 11 months	19	18 years 11 months
1901	22	18 years 7 months	34	19 years 0 months
1902	23	19 years 1 month	39	18 years 9 months

NUMBER OF PUPILS ADMITTED TO THE LOWEST GRADE OF THE ENGLISH HIGH SCHOOL.

Year	Boys	Average Age	Girls	Average Age
1898	60	14 years 8 months	169	15 years 1 month
1899	61	15 years 0 months	152	15 years 0 months
1900	56	15 years 5 months	170	15 years 1 month
1901	46	14 years 11 months	145	15 years 0 months
1902	41	14 years 8 months	155	15 years 1 month

NUMBER OF PUPILS GRADUATED FROM THE ENGLISH HIGH SCHOOL.

Year	Boys	Average Age	Girls	Average Age
1898	19	18 years 9 months	64	18 years 5 months
1899	14	18 years 4 months	45	18 years 6 months
1900	23	18 years 2 months	45	18 years 8 months
1901	13	18 years 3 months	47	18 years 9 months
1902	25	18 years 7 months	61	18 years 9 months

NUMBER OF PUPILS ADMITTED TO THE LOWEST GRADE OF THE MANUAL TRAINING SCHOOL, WITH THE NUMBER OF GRADUATES.

Year	Admitted	Average Age	Graduated	Average Age
1898	70	15 years 5 months	14	18 years 2 months
1899	92	15 years 3 months	13	18 years 6 months
1900	74	15 years 0 months	16	19 years 0 months
1901	110	15 years 2 months	21	18 years 3 months
1902	127	15 years 2 months	23	19 years 2 months

NUMBER OF PUPILS GRADUATED FROM THE GRAMMAR AND PRIMARY SCHOOLS.

Year	Grammar Schools. Course, 6 yrs.	Average Age	Primary Schools. Course, 3 yrs.	Average Age
1898	518	15 years 0 months	1,395	9 years 8 months
1899	553	15 years 0 months	1,393	9 years 8 months
1900	582	14 years 11 months	1,423	9 years 7 months
1901	565	14 years 11 months	1,467	9 years 7 months
1902	643	14 years 11 months	1,460	9 years 6 months

Length of Time in Completing the Course of Study in the Grammar Schools.

Year	In 4 years	In 5 years	In 6 years	In 7 years or more
1898	6 per cent	29 per cent	47 per cent	18 per cent
1899	6 per cent	31 per cent	47 per cent	16 per cent
1900	6 per cent	28 per cent	50 per cent	16 per cent
1901	6 per cent	28 per cent	50 per cent	16 per cent
1902	7 per cent	27 per cent	51 per cent	15 per cent

Length of Time in Completing the Course of Study in the Primary Schools.

Year.	In 2 years	In 2½ years	In 3 years	In 3½ years	In 4 years	In 4½ years or more
1898	4 per cent	2 per cent	59 per cent	6 per cent	20 per cent	9 per cent
1899	3 per cent	4 per cent	58 per cent	7 per cent	20 per cent	8 per cent
1900	2 per cent	2 per cent	59 per cent	6 per cent	22 per cent	9 per cent
1901	3 per cent	1 per cent	61 per cent	5 per cent	20 per cent	10 per cent
1902	3 per cent	2 per cent	62 per cent	4 per cent	20 per cent	9 per cent

Number of Pupils in the Latin School, December, 1902.

Grade	Boys	Girls	Total	Per cent
Fourteenth	29	33	62	.127
Thirteenth	34	31	65	.133
Twelfth	56	45	101	.206
Eleventh	55	56	111	.227
Tenth	59	91	150	.307
Total	233	256	489	

Number of Pupils in the English High School, December, 1902.

Grade	Boys	Girls	Total	Per cent
Thirteenth	22	61	83	.153
Twelfth	17	90	107	.198
Eleventh	33	95	128	.237
Tenth	51	147	198	.366
Specials	4	21	25	.046
Total	127	414	541	

NUMBER OF PUPILS IN THE MANUAL TRAINING SCHOOL, DECEMBER, 1902.

Grade	Boys		Per cent
Thirteenth	48	This school is for boys	.177
Twelfth	42	only. It became a part	.154
Eleventh	66	of the public school sys-	.243
Tenth	116	tem, January 1, 1899.	.426
Total	272		

NUMBER OF PUPILS IN THE GRAMMAR SCHOOLS, DECEMBER, 1902.

Grade	Boys	Girls	Total	Per cent
Ninth	261	334	595	.086
D	50	60	110	.016
Eighth	363	469	832	.121
C	89	72	161	.023
Seventh	442	531	973	.141
Sixth	526	594	1,120	.163
B	96	130	226	.033
Fifth	617	606	1,223	.177
A	155	195	350	.050
Fourth	671	637	1,308	.190
Total	3,270	3,628	6,898	

NUMBER OF PUPILS IN THE PRIMARY SCHOOLS, DECEMBER, 1902.

Grade	Boys	Girls	Total	Per cent
Third	794	847	1,641	.282
Second	904	874	1,778	.305
First	1,300	1,106	2,406	.413
Total	2,998	2,827	5,825	

NUMBER OF PUPILS AND TEACHERS IN THE KINDERGARTENS.

Year	Boys	Girls	Total	Number of Teachers
1900	337	356	693	26
1901	355	351	706	25
1902	358	364	722	25

Number of Pupils Belonging to the Evening Drawing Schools, with the Average Attendance.

1897	1898	1899	1900	1901	1902
209	182	194	184	193	220
114	99	99	99	97	114

Number of Pupils Belonging to the Evening Schools, with the Average Attendance.

1897	1898	1899	1900	1901	1902
1,225	1,165	1,158	1,248	1,286	1,367
448	494	452	420	464	510

Number of Pupils in the Private Schools in Cambridge, Including those in the Parochial Schools.

1897	1898	1899	1900	1901	1902
2,512	2,637	2,713	3,004	3,439	3,451

Number of Age and Schooling Certificates Issued.

1897	1898	1899	1900	1901	1902
229	291	324	380	387	507 *354

* Issued to minors over sixteen years of age, in accordance with the law of 1902.

Cost of Instruction in the Day Schools.

[Salaries of teachers, superintendent, supervisor, agent, clerks and truant officers.]

Year	Number of Teachers in December	Average Number of Pupils	Whole Cost	Cost per Pupil
1876	176	7,066	$164,818 00	$23 32
1878	173	7,028	136,491 20	19 42
1880	182	7,175	130,371 75	18 17
1882	200	7,898	137,328 55	17 38
1884	216	8,414	152,290 62	18 09
1886	233	9,218	165,277 42	17 92
1888	241	9,756	175,773 80	18 02
1890	263	10,089	190,558 21	18 89
1892	284	10,861	207,144 22	19 07
1894	312	11,166	228,873 48	20 50
1896	337	11,957	245,104 01	20 50
1898	364	12,907	268,182 97	20 78
1900	409	13,816	326,512 34	23 63
1901	413	14,144	336,149 80	23 77
1902	417	14,244	343,787 00	24 14

Cost of the Day Schools.

[This includes the cost of instruction, of text-books and supplies, of incidental expenses, of the care of truants, of the care and repair of schoolhouses, and of the transportation of pupils.]

Year	Number of Teachers in December	Average Number of Pupils	Whole Cost	Cost per Pupil
1876	176	7,066	$200,894 09	$28 43
1878	173	7,028	162,437 77	23 11
1880	182	7,175	153,967 56	21 45
1882	200	7,898	166,230 52	21 04
1884	216	8,414	203,234 56	24 15
1886	233	9,218	207,536 46	22 51
1888	241	9,756	225,408 57	23 10
1890	263	10,089	241,980 84	23 98
1892	284	10,861	266,651 02	24 55
1894	312	11,166	287,137 37	25 72
1896	337	11,957	316,090 83	26 44
1898	364	12,907	345,566 30	26 77
1900	409	13,816	417,554 00	30 22
1901	413	14,144	429,208 22	30 35
1902	417	14,244	427,356 71	30 00

Cost of Instruction in the Evening Schools.

Year	Elementary	High	Drawing	Total
1897	$2,086 00	$1,274 50	$1,060 00	$4,420 50
1898	2,324 00	1,439 00	1,091 00	4,854 00
1899	2,570 00	1,499 00	1,206 00	5,275 00
1900	3,375 00	1,874 00	1,430 00	6,679 00
1901	2,777 50	1,551 75	1,205 00	5,534 25
1902	3,218 50	1,682 75	1,298 00	6,199 25

Finances.

(For the financial year ending December 1, 1902.)

Cost of instruction in day schools	$343,787 00
Cost of instruction in evening schools	6,199 25
Cost of care and repair, day schools	60,993 58
Cost of care, evening schools	1,963 20
Cost of text-books and supplies, day schools	18,775 53
Cost of text-books and supplies, evening schools	445 41
Expended for incidentals	1,554 35
Expended for care of truants	1,847 10
Expended for flags	99 15
Expended for transportation of pupils	300 00
Expended for vacation schools	1,016 97
Expended for land for schoolhouse, Elm street	11,257 75
Expended on new schoolhouse, Ward VIII.	3,275 59
Expended on new schoolhouse, Ward III	18,958 66
Expended for furniture for new schoolhouse, Ward VIII.	569 50
Expended on different buildings on account of the fire at the Allston school, December 12, 1901	1,600 69
	$472,643 73
Deducting from the above the amount received from the Hopkins Fund, $621.56, the tuition of State wards, $691.00, the tuition of non-resident pupils, $6,718.25	8,030 81
The actual cost of the schools to the city is	$464,612 92
Assessed value of real and personal estates, May, 1902,	98,139,885 00
Ratio of expenditure for school purposes to the valuation of 1902	.0047

Statistics Taken from the Fifty-sixth Annual Report of the Secretary of the State Board of Education.

Number of towns and cities: towns, 320; cities, 33	353
Number of public schools based on the single class room as the unit of comparison	11,017
Number of pupils between seven and fourteen years of age attending the public schools during the year 1901–1902	299,065
Number of different pupils between five and fifteen years of age attending the public schools during the year 1901–1902	420,308
Number of pupils under five years of age attending the public schools during the year 1901–1902	11,273
Number of pupils over fifteen years of age attending the public schools during the year 1901–1902	42,653
Number of pupils of all ages in the public schools during the year 1901–1902	474,234
Average membership of pupils in all the public schools during the year 1901–1902	415,533
Average attendance in all the public schools during the year 1901–1902	380,026
Percentage of attendance based on the average membership	92

Number of persons employed as teachers in the public schools during the year: men, 1,240; women, 12,665	13,905
Number of teachers who have graduated from normal schools	5,451
Average number of months the public schools have been kept for the entire year	9 mos., 6 days
Number of high schools	260
Number of teachers in high schools	1,592
Number of pupils in high schools	40,252
Total expenditure for the support of the public schools	$11,690,070 05
Total expenditure for new schoolhouses, permanent improvements, and ordinary repairs	3,442,063 33
Entire expenditure	$15,132,133 38

TABULAR VIEW.

DECEMBER 31, 1902.

Prepared by the Secretary of the School Committee.

Names of Schools	Teachers	Salaries	No. of Pupils Dec. 31, 1902
Latin	William F. Bradbury	$3,000	489
	Theodore P. Adams	2,000	
	John I. Phinney	2,000	
	Max Benshimol	1,400	
	Helen M. Albee	950	
	Constance Alexander	950	
	Mabel V. Arnold	700	
	Mary A. Bachelder	950	
	Alice C. Baldwin	950	
	Almira W. Bates	600	
	Margaret S. Bradbury	600	
	Isabel S. Burton	950	
	Alice D. Chamberlain	700	
	Etta L. Davis	750	
	Grace C. Davenport	500	
	Caroline Drew	950	
	Mary C Hardy*	950	
	Rose Hardwick	950	
	Mabel E. Harris	950	
	Helen W. Munroe	950	
	Louisa P. Parker	950	
	Lena G. Perrigo	950	
	Lucile C. Reynolds	750	
	Ethel V. Sampson	750	
	Jennie S Spring	950	
	Annie S Dodge†	600	
English High	Ray Greene Huling	3,000	541
	Edwin L. Sargent	2,000	
	Joseph A. Coolidge	1,600	
	Russell T. Greene, Jr.	1,500	
	Francis L. Bain	850	
	Grace L. Deering	1,200	
	Caroline Close	950	
	Bertha L. Cogswell	950	
	Gertrude H. Crook	950	
	Mary L. Cunningham	700	
	Esther S. Dodge	950	
	Katherine H. James	700	
	Jeannie B. Kenrick	750	
	Maud A. Lawson	950	
	Henrietta E. McIntire	950	
	Mary Moulton	950	
	Lillian C. Rogers	950	
	Caroline A. Sawyer	950	
	Emma A. Scudder	950	
	Florence W. Smith	950	
	Martha R. Smith	950	

* On leave of absence for study or travel in accordance with Rule 70.
† Secretary and Librarian.

Tabular View — Continued.

Names of Schools	Teachers	Salaries	No. of Pupils Dec. 31, 1902
English High	Delia M. Stickney	$1,200	
	Annie F. Stratton	750	
	Mabel D. Watson	700	
	Martha L. Babbitt*	600	
Manual Training	Charles H Morse	3,000	272
	Myra I. Ellis	1,300	
	Helen W. Metcalf	950	
	Richard H. Gallagher	1,000	
	Lewis D. Hill	1,300	
	John M. Hussey	1,200	
	James E. MacWhinnie	1,100	
	Joseph M Norton	1,100	
	Harry E. Rich	700	
	Walter M. Smith	1,050	
	Wilbur B. Sprague	1,000	
	James G. Telfer	1,500	
	Frederick W. Turner	1,500	
	Albert L. Ware	1,200	
	John W. Wood, Jr.	1,400	
	John J. McKenzie*	500	
Agassiz Grammar	Maria L Baldwin	1,000	157
Agassiz Primary	Edith C. Arey	650	129
	Addie B Byam	700	
	Frances W. Dawson	700	
	Lillian G. Goodwin	650	
	Mary A. Parsons	700	
	Grace C. Stedman	700	
	Jennie L. Upham	700	
Allston Grammar	Everett L. Getchell	1,850	338
Allston Primary	Ella S. Danforth	900	81
	Mary A. Driscoll	450	
	Maude M. Dutton	600	
	Lucy M. Fletcher	700	
	Jennie C. Hardy	600	
	Maude A. Johnston	450	
	Ellen A. Kidder	700	
	Ella M. Leaver	700	
	Catharine A. McLean	700	
	Ethel I. Murch	600	
	Esther D. Paul	700	
	Carrie L. Power	600	
	Mary E. Regan	600	
	Henriette E. DeRochemont	750	
Boardman, Primary	Elizabeth J. Karcher	790	363
	Mabel E. Blake	700	
	Elizabeth M Born	450	
	Harriette G. Gilmore	500	
	Maud E. Kimball	700	
	Eva G. Oakes	700	
	C. Florence Smith	700	
	Emma G. Wentworth	450	
Cushing, Primary	Maude A. Deehan	760	78
	Margaret E Sheehan	500	
Dunster, Primary	Susan E. Wyeth	760	41

* Secretary and Librarian.

Tabular View — Continued.

Names of Schools	Teachers	Salaries	No. of Pupils Dec. 31, 1902
Ellis, Grammar	Edward O. Grover	$2,000	502
	Nellie A. Hutchins	900	
	Caroline L. Blake	800	
	Adelaide G. Bunker	700	
	Emma A. Faulkner	700	
	Harriet Foster	700	
	Lottie L. Griswold	700	
	Lousie H. Griswold	700	
	Ella M. Horne	700	
	Ellen J. Hunt	700	
	Flora C. Ingraham	700	
	Sarah W. Mendell	650	
	Mabelle E. Porter	700	
	Mary A Stephenson	700	
Felton, Primary	Florence A. Rogers	770	194
	Marcia R. Bowman	700	
	S. Emma Davis	700	
	Carrie H. Smith	700	
Gannett, Primary	Mary A. Rady	775	233
	Annie M Billings	700	
	Mary A. Doran	700	
	Katherine A. Gaskill	550	
	Margaret F. Sanderson	550	
	Gertrude T. Sullivan	500	
Gore, Primary	Frances E. Pendexter	810	503
	Charlotte A. Callahan	550	
	Katherine L Dolan	650	
	Mary L. Dolan	650	
	Minnie A. Doran	700	
	Kate A. Hegarty	700	
	Mary A. Hurley	700	
	Katherine L. NcElroy	700	
	Julia G. McHugh	700	
	Mary E. Mulloney	700	
	Anastasia Peters	700	
	Nora E. Reardon	550	
Harvard, Grammar	Thomas W. Davis	2,000	770
	Arthur B. Webber	1,400	
	Ada H. Wellington	900	
	Margaret B. Wellington	800	
	Harriette F. Sawin	750	
	Annie M. Street	750	
	Addie L Bartlett	700	
	Winifred V. Cobb	700	
	Nellie A. Coburn	700	
	Frances Fabyan	700	
	Margaret M Fearns	700	
	Estella J. French	700	
	Annie B. Lowell	700	
	Josephine MacDonald	600	
	Bernice E. Mayhew	500	
	Waitie M. Nash	600	
	Laura L. Parmenter	700	
	Louise C. Patterson*	700	

* On leave of absence for study or travel in accordance with Rule 70.

Tabular View — Continued.

Names of Schools	Teachers	Salaries	No. of Pupils Dec. 31, 1902
Harvard, Grammar	Annie L. Prince	$550	
	Elizabeth L. Setchell.	700	
	Hortense O. Young	700	
Holmes, Primary	Lucy C. Wyeth	760	92
	Marianne M. Webb	700	
Lassell, Primary	Frances E. Whoriskey	770	169
	Rose V. Collier	700	
	Elizabeth B. Gahm	700	
	Mary E. Whoriskey	700	
Lowell, Primary	Eusebia A. Minard	765	69
	Agnes J. McElroy	700	
Merrill, Primary	Julia M. Davis	550	202
	Louise W. Harris	700	
	Daisy M. Haynes	550	
	Marion B. Magwire	700	
	Nellie S. Walker	650	
Morse { Grammar	Mary A. Townsend	2,000	{ 500
Morse { Primary	Mary E. Towle	900	{ 204
	Marcia E Ridlon	750	
	Elizabeth J. Baldwin	700	
	Christina R. Denyven	700	
	Ida M. Holden	550	
	Ida J. Holmes	700	
	Florence E Hunter	650	
	Grace H. Manter	700	
	Alice E. May	700	
	Helen Montague	550	
	Anna A. O'Connell	600	
	Ella M. Pinkham.	700	
	Elizabeth H. Richards	700	
	Emilie F Richardson	700	
	Mary E. Sawyer	700	
	Lucy M. Soulée	700	
	Mary E. Warren	700	
Otis, Primary	Ellen N. Leighton	785	294
	Frances Allen	700	
	Anna E. Callahan	700	
	Josephine M. Doherty	700	
	Luella M. Marsh	700	
	Anna N. Sullivan	500	
	Margaret Sullivan	700	
	Ellen C. Walsh	700	
Parker, Primary	Mary A. Knowles	780	280
	Charlotte E. Clapp	700	
	Butella E. L. Conland	700	
	Mattie S Cutting	700	
	Harriet R. Harrington	700	
	Agnes Marchant	700	
Peabody { Grammar	Frederick S. Cutter	2,000	{ 402
Peabody { Primary	Charlotte A. Ewell	900	{ 152
	Mary H. Ellis	750	
	Susan C Allison	700	
	Anna F. Bellows	700	
	Katherine L. Carr	600	
	Helen E. Hazard	700	

Tabular View — Continued.

Names of Schools	Teachers	Salaries	No. of Pupils Dec. 31, 1902
Peabody { Grammar	M. Lizzie Hewitt	$700	
Peabody { Primary	Martha A. Parker	550	
	Effie A. Perkins	700	
	Maude R. Pullen	700	
	Dora Trefethen	600	
	Alice M. Tufts	700	
Putnam, Grammar	Frederick B. Thompson	1,850	646
	Eliza M Hussey	900	
	Grace Clark	750	
	Mary A. Carmichael	700	
	Anna L. P. Collins	700	
	Sarah M. Grieves	700	
	Hattie L. Jewell	700	
	Annie B. Josselyn	700	
	Mary A. Macklin	450	
	Marcia T. Marple	700	
	Katharine I. Nicolson	650	
	Margaret F. O'Keefe	550	
	Eliza S. Paddack	750	
	Katherine E. Smyth	550	
	Annie A. Trelegan	700	
	Minnie F Wilson	550	
Reed, Primary	Margaret T. Burke	770	159
	Elizabeth G Nelligan	600	
	Julia A. Robinson	700	
	Clara W. Ruggli	550	
Riverside, Primary	Elizabeth A. Tower	770	155
	Amanda M. Alger	700	
	Mary A. Burke	700	
	Hattie A. Thayer	550	
Roberts, Grammar	W. Mortimer MacVicar	2,000	545
	Sara A. Bailey	900	
	Emily R. Pitkin	750	
	Susan M. Adams	700	
	Mary Blair	700	
	Elizabeth M. Breslin	500	
	Mary M Brigham	700	
	Susan L. Keniston	700	
	Evelyn B. Kenney	700	
	Ada M. Litchfield	700	
	Nina M. Marsh	700	
	Clara E. Phinney	450	
	Ida G. Smith	700	
	Caroline M. Williams	700	
Russell { Grammar	Arthur C. Wadsworth	2,000	{ 333
Russell { Primary	Alice G Teele	900	{ 119
	Carrie J. Allison	700	
	Fannie P. Browning	700	
	Ella E. Buttrick	700	
	Mary A. Connelly	700	
	Anna M. Lyons	450	
	M. Ursula Magrath	550	
	H. Maud McLean	700	
	Gertrude E. Russell	700	
	Loretta L Shaw	700	

Tabular View — Continued.

Names of Schools	Teachers	Salaries	No. of Pupils Dec. 31, 1902
Sargent, Primary	Mary A. Brown	$770	186
	Christina D. Barbey	700	
	Elmira F. Hall	700	
	Marion Prescott	650	
Shepard, Grammar	Evelyn J. Locke	900	185
Shepard, Primary	Mary E. Bassett	700	122
	Corabelle H. Bates	550	
	Mary F. Calnane	700	
	Florence M. Dudley	700	
	Alice M. Gage	700	
	Mary M. Gilman	700	
	Theresa H Mahoney	650	
Sleeper, Grammar	A. Estelle Ingraham	900	129
Sleeper, Primary	Emily Bissell	700	192
	Evelyn M. Dormer	700	
	Fannie G. Flanders	700	
	Elizabeth O. Haynes	550	
	Melissa M. Lloyd	700	
	Margaret E Quinn	500	
	Blanche C. Trefethen	700	
Stearns, Primary	Fannie E. Higgins	770	182
	Maria J. Bacon	700	
	Ellen A. Cheney	700	
	Eva A. Taylor	700	
Tarbell, Primary	Emma J. Young	770	188
	Florence J. Alley	700	
	Carrie P. Pierce	700	
	Anna H. Welsh	500	
Taylor, Grammar	Ella R. Avery	900	156
Taylor, Primary	Mary A. Boland	700	249
	Bridget T. Boyle	700	
	Lilian M. Canty	700	
	Lillian W Davis	450	
	Josephine Day	700	
	Cecelia F. Leahy	700	
	Maud J Paget	600	
	Agnes M. Sheridan	700	
	Mabelle S Welsh	550	
Thorndike, Grammar	Ruel H. Fletcher	2,000	544
	Harriet A. Townsend	900	
	Laura A. Westcott	750	
	Flora E Cooter	450	
	Jennie W. Cronin	450	
	Grace W. Fletcher	700	
	Mary A. Grant	650	
	Harriet M. Hanson	700	
	Emma A. Hopkins	700	
	Lillian H Kenney	500	
	Mary E. Nason	700	
	Ellen M. Plympton	700	
	Susan L. Senter	700	
	Lydia A. Whitcher	800	
Washington, Grammar	John W. Freese	2,000	427
	Blanche E. Townsend	900	
	Alice P. Fay	750	

Tabular View — Continued.

Names of Schools	Teachers	Salaries	No. of Pupils Dec. 31, 1902
Washington, Grammar	Eldora J. Clark	$700	
	Mary L. Ells	700	
	Helen G. Fulton.....	600	
	Winifred L Kinsley.....	700	
	Emma Penney.....	700	
	Margaret J. Penney	700	
	Bessie H Pike	700	
	Hattie Shepherd.....	700	
	Mary E. Stiles.....	700	
Webster, Grammar.....	John D. Billings	2,000	745
	George L. Farley.....	1,200	
	Alice C. Phinney	900	
	Martha N. Hanson.....	800	
	Ada A. Billings	750	
	Mabel T. Ashley.....	700	
	Charlotte M. Chase.....	700	
	Fanny F. Curtis.....	700	
	Susan I. Downs.....	700	
	Gertrude B. Duffy.....	550	
	Josephine Hills.....	700	
	Gertrude I. Johnson.....	700	
	Minnie V. Reid.....	700	
	Harriette E. Shepard	700	
	Olive L. Slater	700	
	Maud A. Sumner	650	
	Ellen F. Watson.....	700	
	Katherine L. Wight	600	
Wellington { Grammar.....	Herbert H. Fates.....	2,500	{ 519
Wellington { Primary.....	Sarah J. Gunnison.....	1,000	{ 410
	Margaret Kidd	1,000	
	Mary I. Vinton.....	1,000	
	Carrie H. Stevens.....	900	
	Emma M. Taylor.....	700	
	Training Class	8,556	
Willard, Primary.....	Katharine E. Hayes	760	534
	Agalena Aldrich	500	
	Sally N. Chamberlin.	700	
	Elizabeth M. Crowley	500	
	M Elizabeth Evans	700	
	Ella F. Gulliver	700	
	Julia S. Gushee	700	
	Mary E. G. Harrington	700	
	Katherine M. Lowell	700	
	Mary A. O'Hara.....	600	
	Belle Menard	700	
	Eliza D. Watson..	700	
	Grace R Woodward.....	700	
Wyman, Primary.....	M Carrie Dickman.....	780	245
	Addie M. Bettinson	700	
	Mary H. Brooks.....	700	
	Georgianna P. Dutcher	700	
	Genevieve S Flint.....	700	
	Agnes Ross Smith.....	550	
Kindergartens { Boardman	Mary B. Pratt.	700	54
Kindergartens {	Hattie P. Russell.....	550	

Tabular View — Concluded.

Names of Schools		Teachers	Salaries	No. of Pupils Dec. 31, 1902
Kindergartens	Corlett	Sarah S. Wells	$700	46
		Annie M. Dodd	600	
	Dunster	Clara A. Hall	700	28
	Gannett	Carrie E. Shepherd	700	56
		Marion L. Akerman	550	
	Gore	Selma E. Berthold	700	61
		Jennie S. Clough	600	
	Lowell	Melinda Gates	700	36
	Merrill	Caroline A. Leighton	700	60
		Gretchen K. Weinschenk	550	
	Peabody	Julia L. Frame	700	39
	Riverside	Edith L Lesley	700	56
		Olive M. Lesley	600	
	Shaw	Harriette E Ryan*	700	53
		Leonice S. Morse	650	
		Della E Cabot	450	
	Sleeper	Mabel S. Adams	700	56
		Caroline E. Simpson	550	
	Taylor	Mary F. Leland	700	65
		Bertha V. Jameson	550	
	Wellington	Gertrude M. Gove	700	54
		Florence Rice	600	
	Willard	Alice V. McIntire	700	58
		Anna M. Gage	450	

* On leave of absence for study or travel in accordance with Rule 70.

Teachers of Sewing — Agnes Gordon	$700
Alice H. Nay	600
Nancy T. Dawe	600
Director of Music — Frederick Elmer Chapman	2,000
Assistant in Music — Georgia E. Martin	800
Director of Drawing — Peter Roos	1,900
Assistant in Drawing — Lucia N. Jennison	800
Director of Nature Study — Sarah E. Brassill	1,000
Director of Physical Training — Sara Eleanor Boudren	900
Instructor of Physical Training in the High Schools — Bessie W. Howard	700
Superintendent — Francis Cogswell	3,500
Supervisor of Primary Schools — Mary A. Lewis	1,200
Agent — Sanford B. Hubbard	2,100
Clerks — Althea B. Frost	750
Myrta E. Smith	600
Porter — John Lemon	600
Truant Officers — Lucian S. Cabot	1,000
John Carmichael	1,000
William H. Porter	1,000
Thomas F. Riley	900

Summary.

Number of pupils in Latin School	489
Number of pupils in English High School	541
Number of pupils in Rindge Manual Training School	272
Number of pupils in Grammar Schools	6,898
Number of pupils in Primary Schools	5,825
Number of pupils in Kindergartens	722
Total	14,747
Number of pupils belonging to the public schools, December 31, 1901	14,494
Increase of pupils, 1902	253
Increase of pupils, 1901	62
Increase of pupils, 1900	332
Increase of pupils, 1899	314
Increase of pupils, 1898	476
Increase of pupils, 1897	422
Increase of pupils, 1896	714
Increase of pupils, 1895	250
Increase of pupils, 1894	278
Increase of pupils, 1893	135
Increase of pupils, 1892	210
Average annual increase of pupils from 1892 to 1902 (inclusive)	313

Cost of Instruction.

Schools and Officers	Cost of Instruction	Average Number of Pupils	* Cost per Pupil
Latin School	$25,236 00	465	$54 27
English High School	26,747 51	498	53 71
Manual Training School	19,108 67	242	78 96
Training School (Teachers)	15,656 42	887	17 65
Grammar Schools (except Training School)	127,747 99	6,227	20 52
Primary Schools (except Training School)	89,927 49	5,305	16 95
Kindergartens	16,227 17	620	26 17
Teachers of Sewing	1,900 00	....	....
Directors of Music	2,240 00	....	....
Directors of Drawing	2,700 00	....	....
Director of Nature Study	1,000 00	....	....
Directors of Physical Training	1,110 00	....	....
Substitute Teachers	1,565 75	....	...
Superintendent	3,500 00	....	....
Supervisor of Primary Schools	1,200 00	....	....
Agent	2,100 00	....	....
Clerks	1,350 00	....	....
Truant Officers	3,870 00	....	....
Porter	600 00	....	....
Total	$343,787 00	14,244	$24 14

Cost of instruction in Evening High School	$1,682 75
Cost of instruction in Evening Elementary Schools	3,218 50
Cost of instruction in Evening Drawing Schools	†1,298 00
Total	$6,199 25

* Until 1901 it has been the practice to use the number belonging to the schools in December in getting these averages. This year and last the average number belonging during the school year has been used. This changes the averages, but seems the proper basis on which to compute them.

† The Director of Drawing is principal of these schools. No part of his salary has been included in this amount.

REMARKS ON THE STATISTICS.

The number of pupils registered during the year ending June, 1902, is 16,341; the average number belonging, 14,244; the average daily attendance, 13,215. In the per cent of attendance there has been an increase of seven-tenths of one per cent over last year. The number belonging to the schools in December, 1901, was 14,494; in December, 1902, 14,747, an increase of 253. The entire cost of the day schools, which includes the cost of instruction, of text-books and supplies, of incidental expenses, of the care of truants, of the care and repair of schoolhouses, and of the transportation of pupils, is less than that of last year by $1,851.51. In the cost of instruction there has been an increase of $7,637.20.

While Cambridge expends a large amount for her schools, there are *two hundred eighteen* towns and cities in the State whch make a larger expenditure in proportion to their wealth. In a list of the thirty-three cities, arranged numerically according to the percentage of their taxable property appropriated to the support of public schools for the year 1901–1902, Cambridge is the *twenty-fifth*. In a list of the towns and cities of the State, arranged numerically according to the sum appropriated for each child in the average membership of the public schools, Cambridge is the *twenty-eighth*.

These statistics relating to the schools of the State are taken from the sixty-sixth annual report of the secretary of the Board of Education.

TEXT-BOOKS AND SUPPLIES.

At a meeting of the Board in December the committee on supplies submitted a detailed report of the expenditures of that committee for the year. The report is as follows: —

In accordance with Section 30 of the Rules of the School Board, the Committee on Supplies submits its eighteenth annual report for the year ending July 1, 1902: —

Stock on hand July 1, 1901	$5,231 81	
Purchases and expenditures to July 1, 1902	20,145 21	
		$25,377 02
Cash sales and damages	$440 36	
Delivered to schools, officers, etc.	20,223 69	
		20,664 05
Stock on hand July 1, 1902		$4,712 97

The purchases and expenditures have been: —

For text-books	$7,789 76	
Desk and reference books	97 47	
Copy books	679 96	
Apparatus and furnishings	2,721 23	
Printing, $174.50; expressage and labor, $308.36	482 86	
Repairing books, $398.53; diplomas, $238.62	637 15	
Tuning pianos	18 50	
Miscellaneous supplies, etc.	7,507 60	
		$19,934 53
Less the value of exchanges		65 49
		$19,869 04

The net cost of text-books and supplies is as follows: —

Stock on hand July 1, 1901	$5,231 81	
Bills paid by City Treasurer	19,869 04	
		$25,100 85
Less stock on hand July 1, 1902	$4,712 97	
Cash paid to City Treasurer, sales and damages	440 36	
		5,153 33
We have, net cost of all schools and officers		$19,947 52

or an average cost per pupil of $1.40. The average cost per pupil per annum for eighteen years has been $1.263.

The annual cost per pupil for text-books and supplies since the introduction of the free text-book law is as follows:—

Year	Cost per Pupil	Year	Cost per Pupil	Year	Cost per Pupil
1885	$1.880	1891	$1.248	1897	$1.094
1886	1.170	1892	1.149	1898	1.268
1887	1.051	1893	1.109	1899	1.225
1888	1.068	1894	1.243	1900	1.740
1889	0.960	1895	1.152	1901	1.203*
1890	1.334	1896	1.436	1902	1.400*

* Until 1901 it has been the practice to use the number belonging to the schools in December in getting these averages. This year and last the average number belonging during the school year has been used. This changes the averages, but seems the proper basis on which to compute them.

	Net Expenses	Cost per Pupil				
		*1902	*1901	1900	1899	1898
Latin School	$1,855 50	$3.990	$3.935	$6.804	$3.245	$3.594
English High School	1,813 44	3.641	4 236	4.642	3.888	3.535
Manual Training School	2,798 67	11.564	11.707	13.515	.....	.....
Training School, teachers	627 09	.707	.704	.....	.....	.....
Grammar Schools	4,789 84	1.152	1.068	1.747	1.476	.977
Mixed Schools	3,744 22	1.140	.933	1.573	1.001	1.532
Primary Schools	2,158 22	.528	.431	.396	.425	.540
Kindergartens	390 84	.630	.329	.692	.303	1.003
Evening Schools	445 41	.....	.....	.....	.....	.....
Special Teachers	81 83	.....	.....	.....	.....	.....
Officers of Board	209 20	.....	.....	.....	.....	.....
Miscellaneous expenses (not chargeable to any grade)	1,054 97	.....	.....	.....	.....	.....
	$19,969 23					
Less profit on sales	21 71	.....	.....	.....	.....	.....
	$19,947 52	$1.400	$1.203	$1.740	$1.225	$1.268

There will be naturally some fluctuation from year to year in the average cost of text-books and supplies, as may be noticed in the preceding table.

A piano, which has been needed at the Latin school since the new building was occupied, was bought for $400, and another to replace a very old one at the Webster school for $325.

Five new lathes have been bought for the Rindge manual training school at a cost, including the expense of installing the same, of $500. Repairs on the apparatus in the blacksmith shop have also been made. To replace books and supplies destroyed by fire at the Allston school cost $650, and two new sloyd outfits have been bought at a cost of $632.

The regular expenditures for text-books and supplies for the current financial year, estimated on the number of pupils in the schools December 1, 1902, will be $18,625.46.

Additional equipment will be needed at the Rindge manual training school to provide for the increased number of pupils, and for this a special appropriation of $2,000 is asked.

By a law passed in 1895 the school committee was required to provide a flagstaff and a flag for every school building, and to have the flag displayed when the weather was suitable. To repair and replace the flags and flagstaffs entails each year a considerable outlay; but it is an

* Until 1901 it has been the practice to use the number belonging to the schools in December in getting these averages. This year and last the average number belonging during the school year has been used. This changes the averages, but seems the proper basis on which to compute them.

expenditure required by statute, and is not at the discretion of the school committee. Last year $200 was asked for, but only $100 was appropriated, and this sum was exhausted early in the year. For the coming year $200 at least will be required.

CHANGES IN TEXT-BOOKS.

The following is the rule relating to changes in text-books: "All proposals for changes in text-books shall be made to the superintendent. If believed by him to deserve consideration, he shall appoint two persons, one of whom shall be a teacher in the service of the city, and they and the superintendent shall examine and each make a written report on the proposed books. These reports shall be kept on file in the office of the superintendent, and shall be open to inspection by members of the Board only. Changes so considered may be recommended to the Board for adoption, when they shall be referred to the committee on text-books."

Under this rule the following text-books have been adopted by the Board during the year 1902: —

For use in the Latin school, Botsford's History of Rome; Cauer's Odyssey.

For use in the English high school, Adams's Commercial Geography; Siedel's Leberecht Hühnchen.

For use in the grammar or primary schools, Brown's Stories of Woods and Fields; the New McGuffey Readers; Shaylor's Vertical Round Hand Writing Books.

For use in all the schools, the Standard Dictionaries to be used in addition to those already authorized.

SCHOOL ACCOMMODATIONS.

The following is from the report of the committee on schoolhouses: —

In compliance with Section 30 of the Rules of the School Board, the Committee on Schoolhouses respectfully submits the following: —

During the year the building for the accommodation of the Washington grammar school and for the large increase in the Rindge manual training school has been completed. It was occupied in part by pupils of the Rindge manual training school in September, and by the pupils of the Washington school in October. About sixty of the pupils of the Washington school were transferred to the Peabody and Russell schools.

There has been expended on this building to date $62,294.70, with a balance of $23,555.96 of the appropriation unexpended.

This schoolhouse is a notable addition to the group of buildings of which the public library is the centre. The exterior is ornamental, and the interior arrangement is ample and convenient. It is heated by steam from the boilers in the Rindge manual training school.

On account of the lack of funds it was thought necessary to put renovated furniture from the old building into many of the rooms, so that much of the furniture is on castings not adjustable which should be replaced by adjustable irons as soon as possible.

Last year land was purchased on Willow street for the site of a schoolhouse at a cost of $9,500. Plans were procured and the erection of the building was begun in June, with the expectation that it would be completed by July 1, 1903.

It has been decided not to rebuild the Allston schoolhouse, and land costing $11,257.75 has been purchased on Elm street for a new building, but no further progress has been made. The schools in the districts which these buildings are to accommodate are so crowded that it is impossible to do the most efficient work. Increased accommodations are also required in Wards Six and Seven.

Better ventilation and drainage are needed for several of the schoolhouses; more furniture, especially at the Morse school, should be supplied with adjustable irons; and the whole system of plumbing at the Rindge manual training school should be removed and made modern.

The following table shows the items of expenditures for the care and repair of schoolhouses: —

Janitor service	$34,106 63
Janitors' supplies	1,724 23
Fuel	11,377 87
Gas and electric lighting	2,082 88
Furnishings	1,628 94
Furniture for new schoolhouse, Ward VIII.	569 50
Ordinary repairs	12,036 23
Expenses on different buildings on account of the fire at the Allston school	1,600 69
Total	$65,126 97

Section 31 of the city charter provides that "The mayor shall appoint the janitors of schoolhouses, subject to confirmation by the school committee, and may remove them at pleasure for cause assigned; and such janitors shall perform their duties under the direction of the school committee."

Under the direction of the committee on schoolhouses, the agent supervises and directs the work of the janitors, and reports to the committee such matters as seem to need consideration. The principals of the schools report each month whether or not the work is done in a satisfactory manner.

The following is from the report of the committee on schoolhouses :—

The work of the janitors of schoolhouses has been done in a more satisfactory manner on the whole than in years past, many of the janitors taking pride in doing their work well and so raising it above drudgery.

The heating apparatus, and in general the heating of the buildings, has been under the supervision of Edward B. Dale, who has been faithful and efficient in this work; and very few rooms have been closed because of lack of heat.

The only change in the force is the appointment, September 11, of John S. Leamer as janitor of the new Washington schoolhouse.

PLAN OF THE SCHOOL REPORT.

For many years the subject matter and arrangement of the statistical part of the school reports have remained essentially unchanged. This has been done because statistics become increasingly valuable when continued on the same plan from year to year. For several years the reports have also contained certain definite information relating to the organization and conduct of the schools, such as is frequently sought by parents and persons interested in school affairs. This has enabled the superintendent to answer many letters of inquiry by simply mailing a school report.

LATIN SCHOOL.

The following table shows the membership of the Latin school and the cost of instruction from year to year for the past eleven years. In this table the cost per pupil is based upon the average number of pupils for the year. In the tables printed in previous reports down to and including the year 1900, the cost per pupil is based upon the number of pupils belonging to the school in December :—

December	Average Number of Pupils	Number of Teachers in December	Cost of Instruction	Cost per Pupil	Number of Graduates
1892.....	213	10	$12,751 07	$59 86	22
1893.....	251	11	13,425 66	53 49	23
1894.....	303	12	14,359 66	47 39	27
1895.....	354	14	15,059 58	42 54	25
1896.....	373	15	16,525 00	44 30	34
1897..	358	16	17,335 00	48 42	35
1898.....	362	16	18,325 00	50 62	43
1899.....	371	19	19,318 68	52 07	43
1900.....	404	22	21,819 00	54 01	39
1901.....	468	22	23,710 34	50 66	56
1902.....	465	24	25,236 00	54 27	62

The cost of the Latin school to the city is less than the above sums by the amount received from the Hopkins Fund, which can be used only for classical instruction, and by the amount received for the tuition of non-resident pupils. This year the amount received from the Hopkins Fund was $621.56; for the tuition of non-resident pupils, $1,702.

The course of study is arranged for five years, or for four years, and is almost wholly decided by the requirements for admission to Harvard

College. Eleven per cent of all the graduates have completed the work in four years. The following is the rule relating to the admission of pupils to the high schools: "Pupils who have received the diploma of a Cambridge grammar school may, on recommendation of the master, be admitted to either high school without an examination. For other persons who desire admission, an examination shall be held at the beginning of the autumn term under the direction of the superintendent, but pupils who are qualified to join existing classes may be admitted at any time on application to the principal. No pupil from any grade in a grammar school shall be examined who does not present a satisfactory certificate that he has pursued his studies during the summer vacation."

From three-fourths to four-fifths of the graduates are usually recommended for admission without an examination. About one-half of the remaining part study during the summer vacation, as required by the rule, and take an examination in September. Pupils who pass a fairly good examination are permitted to attend either high school until the Christmas vacation, at which time their connection with the school as regular pupils ends unless their work has been satisfactory.

Diplomas of graduation signed by the mayor and the head master of the school are awarded to pupils of the high schools who have successfully completed the course of study or its full equivalent, and have sustained a good character.

For non-resident pupils the tuition is $80 a year, payable in advance,—one-half at the beginning and the other half at the middle of the school year. The sessions of the school begin at 8.30 A. M., and end at 1.30 P. M.

The following is from the report of the head master of the Latin school:—

No change has been made in the course of study. The school has had a steady growth since its organization in 1886. Then there were one hundred sixty-eight pupils belonging to the school, now there are nearly five hundred. The number of graduates has also increased from twenty-two in 1892 to sixty-two in 1902.

A number of valuable gifts have been received during the year: 1. Cast of Minerva, from the class of 1877. 2. Cast of Venus, from the class of 1902. 3. A large framed picture, The Discobolus, from the editors of the *Latin and High School Review* and the Alumni of the Latin School. 4. Busts and maps, from William A. Munroe, as follows: (*a*) Bust of Jupiter of Otricoli. Original in the Vatican. (*b*) Bust of Juno Ludovisi. Original in the Villa Ludovisi, Rome. (*c*) Bust of Augustus Cæsar. From statue in the Vatican. (*d*) Bust of Virgil. (*e*) Bust of Venus of Melos. From statue in the Louvre. Three of

Keipert's maps: (*a*) Italia Antiqua. (*b*) Latii Veteris et Finitimarum Regionum. (*c*) Imperii Romani.

ENGLISH HIGH SCHOOL.

The following table shows the membership of the English high school and the cost of instruction for eleven years. Until January 1, 1899, the pupils of the Rindge manual training school were included in the membership of the English high school. This explains the smaller number of pupils since 1898.

In this table the cost per pupil is based upon the average number of pupils for the year. In the tables printed in previous reports down to and including the year 1900, the cost per pupil is based upon the number of pupils belonging to the school in December: —

Year	Average Number of Pupils	Number of Teachers in December.	Cost of Instruction	Cost per Pupil	Number of Graduates
1891.....	480	16	$18,767 50	$39 10	48
1892.....	529	19	20,488 50	38 73	77
1893.....	569	19	22,095 00	38 83	95
1894.....	611	21	23,051 00	37 73	91
1895.....	648	21	24,369 40	37 60	89
1896.....	632	21	24,612 00	38 94	72
1897.....	644	23	25,194 09	39 12	90
1898.....	685	23	26,051 17	38 03	97
1900.....	514	24	25,250 50	49 13	68
1901.....	517	24	26,265 58	50 80	60
1902.....	498	24	26,747 51	53 71	86

The requirements for admission to this school and the rules relating to the granting of diplomas are the same as for the Latin school.

For non-resident pupils the tuition is $80 a year, payable in advance,—one-half at the beginning and the other half at the middle of the school year. The sessions of the school begin at 8.30 A. M., and end at 1.30 P. M.

The following is from the report of the head master of the English high school: —

Six boys and one girl from the English high school took the Harvard admission examinations in the summer of 1902, two for Harvard College, one for Radcliffe College, and four for the Lawrence Scientific School. They attempted thirty-eight subjects and passed in thirty, winning four honors. Eight boys and one girl from this school took forty admission

examinations at the Massachusetts Institute of Technology, passing in thirty-five. Those who took their finals passed clear, and anticipated one or more subjects of the freshman year in each case. Some of these sixteen also took in the autumn additional examinations which are known to have been successful, but of which no detailed report has been received. Two recent graduates of the school, after spending a year or two in business took admission examinations at Dartmouth College last summer with complete success. It is probable that when they entered the high school not more than half of these eighteen expected to go to college or to a scientific school. The desire for higher education was a development from their school career,— in two cases from their business career. This illustrates the difficulty of determining at the age of fourteen the future of an American child, and proves the wisdom of flexibility in school courses.

Within the year the school has been the recipient of three tasteful casts; two given by the graduating class of 1902 on leaving school, and the third coming from the editors of the *Latin and High School Review*, whose former gifts have been gratefully acknowledged. These casts are very welcome. They make an appropriate and graceful addition to the ornamentation of our assembly hall, where they are seen daily by all the pupils, and tend to improve their æsthetic taste. They also serve a valuable purpose as reminders of the kindly appreciation of the school entertained by the donors.

Among the graduates of this school in the class of 1900 was a young colored girl who had done much to earn her own way while a student here. After her graduation, through the kindly aid of some Cambridge ladies, she was enabled to take a year at the Salem normal school. In the following autumn she became a teacher in the Bethany Normal and Industrial Institute in her native state, North Carolina, where she found herself in a position of genuine leadership as a teacher. Her letters to her former teachers led them to inquire whether there were any needs of her pupils which our school could supply. The response came that suitable clothing would relieve the winter necessities of the boys and girls (the school is in the mountains) and would make it possible for some to attend who otherwise must remain at home.

The case was laid before the pupils of this school in November, 1901, with the result that six boxes and barrels, well filled, were sent to the institute. The same action was taken this year, and letters from the happy recipients telling of their joy and of their appreciation of the kind remembrance, are now arriving. It would be hard to determine which have profited most by the experience, the receivers in North Carolina or the givers in Massachusetts.

RINDGE MANUAL TRAINING SCHOOL.

This school was founded by Mr. Frederick H. Rindge in 1888. For ten years he paid the current expenses of the manual training department, the city providing for the academic instruction. January 1, 1899, a complete transfer of the entire plant was made to the city, and the school became an integral part of the school system.

The following table shows the membership of the manual training school and the cost of instruction for three years : —

Year	Average Number of Pupils	Number of Teachers in December	Cost of Instruction	Cost per Pupil	Number of Graduates
1900	192	14	$17,825 73	$92 84	16
1901	191	14	17,988 33	94 18	21
1902	242	15	19,108 67	78 96	23

The cost of the manual training school to the city is less than the above sums by the amounts received from Harvard University for the instruction of a class of students during the summer vacation, and for the tuition of non-resident pupils. The amount received this year from both sources was $4,654.

The course of instruction covers four years. The sessions are five and one-half hours a day, instead of five, as in the other high schools. About one-third of the time is given to the work of manual training, and the remainder to the subjects usually taught in high schools, with the exception of Latin and Greek.

The requirements for admission to this school and the rules relating to the granting of diplomas are the same as for the Latin school.

For non-resident pupils, the tuition is $150 a year, payable in advance, — one-half at the beginning, and the other half at the middle of the school year. The sessions of the school begin at 8.30 A. M., and end at 2 P. M.

The following is from the report of the head master of the Rindge manual training school : —

The completion of the Washington school building, and the assignment of four rooms to this school, has been the most important event of the year.

During the past six years we have steadily increased in numbers. Six years ago we registered one-third of the boys who graduated from the grammar schools and entered the high schools. Last September more than one-half of the boys who entered the high schools came to this school. Our increase this year over the numbers a year ago is 17 per cent. I regret that so many parents fail to grasp the fact that this school offers the best advantages to young men intending to enter the Massachusetts Institute of Technology or the Lawrence Scientific School.

An increase in our machine shop equipment will be necessary, that we may provide for the second class the latter half of this year. An increase in our pattern shop facilities is also necessary. We have lost several able teachers during the past few years, due to the fact that our salaries were not as large as those offered by other cities.

The cost per pupil for this school is of necessity larger than for a purely academic high school, but the demand for our graduates at comparatively large pay indicates that the public looks with favor upon the training received.

An effort is made to give proper emphasis to the academic features of the course, and to make that work interesting and effective by bringing it into intimate relation with instruction in the mechanic arts.

The manual dexterity and the thorough knowledge of tools, machinery, and mechanical processes acquired in the shops, at an age when time can be most easily spared for such training, is of inestimable value in any scientific pursuit.

At the beginning of the third year a choice is offered between the college course designed for boys fitting for higher scientific schools and the general course for those who do not intend to enter the higher schools. The work of the college course is arranged to meet the requirements for admission to the Massachusetts Institute of Technology and the Lawrence Scientific School.

MANUAL TRAINING IN OTHER SCHOOLS.

The statutes require that every town and city of twenty thousand or more inhabitants shall maintain, as part of both its elementary and its high school system, the teaching of manual training. The Rindge manual training school gives the required instruction to boys of the high school grade, and provision is made in the English high school for girls of this grade, sloyd being taught in the second year, and cooking in the third. Sewing in the grammar schools may be considered as meeting the requirements for girls in the grammar grades.

The requirements that manual training shall be taught in elementary schools as well as in high schools has not been fully complied with. Provision has been made for the teaching of this subject in only three of the grammar schools — the Putnam, the Roberts, and the Wellington. When the schoolhouse on Willow street is completed, provision can be made for the Allston school. Now that the Washington school is so closely connected with the Rindge manual training school, arrangements could be made for the pupils of that school to use the benches at the manual training school building on afternoons between the hours of two and four, there being no afternoon session at the manual training school.

At the Harvard school there is an unoccupied room in the basement which might be used for a class in manual training. The superintendent hopes that in the near future provision will be made for the teaching of manual training in all the grammar schools, as required by statute. The work of manual training in all the schools is under the direction of the head master of the Rindge manual training school.

WELLINGTON TRAINING SCHOOL.

This school was opened in September, 1884, and differs from the other schools in this respect, — all the grades, except the eighth and ninth, are taught by young teachers. Their work, however, is done under the immediate supervision of a master and three assistants, who are held responsible for the instruction and management of the school. For several years the seventh grade has been taught by a graduate of the training class.

The object of conducting a school on this plan is to give Cambridge young women who desire to teach, and who have made special preparation for the work, an opportunity to gain experience under conditions favorable to their own success, and without prejudice to the interest of their pupils.

Graduates of the English high school or of the Latin school, who have also graduated from one of our state normal schools, are preferred candidates for the position of teacher in this school. Other persons of equal preparation may be appointed.

The required term of service is one year. Teachers are appointed on probation, and may be excused or dismissed at any time by the superintendent, with the approval of the committee on the training school.

No teacher is considered a graduate of the school until by vote of

the training school committee she is admitted to the graduate class, which is known as Class B.

The money compensation for the first three months, and until satisfactory service is rendered, is at the rate of two hundred dollars a year. For the remaining part of the year it is at the rate of two hundred fifty dollars.

Graduates temporarily employed as teachers in this school are paid at the rate of three hundred dollars a year. Graduates selected to act as substitutes in any school are paid at the rate of four hundred fifty dollars.

That the direct influence of the school may be continued, it is the duty of the master, or of one of the supervising teachers, occasionally to visit the schools of the graduates who are teaching in Cambridge. The school contains all the grades of the grammar and primary schools and a kindergarten.

By the rules of the school board the superintendent is authorized to employ as many substitutes and temporary teachers as may be necessary to take the places of absent teachers. These teachers are usually assigned to the training school, when not otherwise employed, that there may be at this school a sufficient number of teachers to make it practicable for the members of the training class to visit other schools.

The following is from the report of the committee on the training school : —

The general conditions of the school remain about the same as they were last year. Over one thousand children have been enrolled and have been cared for in the Wellington buildings, with the exception of one class, which was sent to the Merrill school. The great majority of the graduates of the training class have found positions in the schools of Cambridge. At the present time nearly fifty per cent of the teachers in our grammar and primary schools, not including those in the Wellington, are graduates of this school. Recently several of these graduates have been called to Boston.

The committee is pleased to report that the long expected schoolhouse on Willow street is in process of erection. When it is completed, the crowded condition of the Wellington school may find relief.

GRAMMAR SCHOOLS.

The number of pupils in these grades on the first of December was six thousand eight hundred ninety-eight, and the number of teachers including masters and special teachers, was one hundred seventy-nine.

The cost of instruction for each pupil for the year has been $20.52. This does not include the cost of supervision or the cost of the Wellington school.

For non-resident pupils the tuition is $30 a year, payable in advance, — one-half at the beginning and the other half at the middle of the school year.

The course of study is for six years, but the schools are so classified as to give the pupils an opportunity to complete the course in four years or in five years. The average age of those who entered last September was nine years nine months. The number of graduates was five hundred sixty-five, their average age being fourteen years eleven months. Of these, 6 per cent completed the course in four years, 28 per cent in five years, 50 per cent in six years, and 16 per cent in seven years or more.

Pupils are promoted by classes from the primary schools at the beginning of the autumn term; but individual pupils may be promoted at other times, if it is deemed expedient by the supervisor of primary schools and the superintendent.

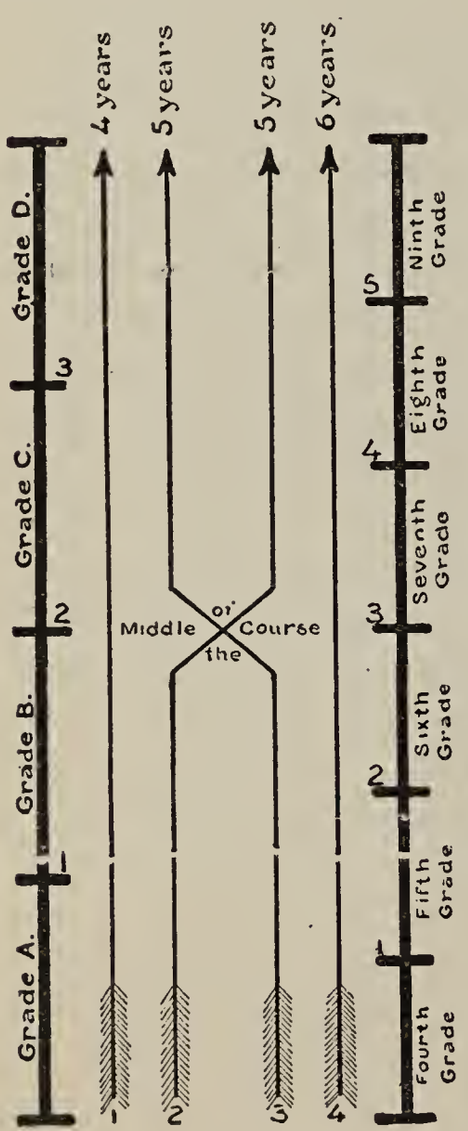
Promotions from grade to grade in the grammar schools, and from the grammar to the high schools, are made by the teachers under the direction of the masters and the superintendent. Pupils qualified to join existing classes may be admitted at any time on application to the master of the school. No regular pre-announced examinations are held in these schools, but the results of such written exercises and reviews as the teachers and masters may require from time to time may be used as a part of the basis of promotion.

The thoroughness with which the work is done in any school is shown in part by the ability of the pupils to do the work in the high schools. The pupils are admitted to the high schools on trial; and, by the rule of the high school committee, any pupil who fails to maintain a suitable rank is reported to that committee, and no pupil thus reported can continue in either high school, except by special vote. For two years, however, provision has been made by which these pupils have been allowed to remain in the English high school, and receive such instruction as would best fit them to enter again upon the regular work of the school at its reorganization in September.

In the grammar schools special teachers are appointed to help such pupils as seem able to do the work in less than six years, and to aid those who without personal instruction would require more than six years. This action of the committee removes the most serious objection to the graded system of schools.

The course of study is divided in two ways: (1) into six sections; (2) into four sections; each section covering a year's work. Pupils taking

the course in six years are classified in six grades, called the fourth, fifth, sixth, seventh, eighth, and ninth grades. Those taking it in four years are classified in four grades, called grades A, B, C, and D. When pupils are promoted to the grammar schools they begin the first year's work together. After two or three months they are separated into two divisions.



One division advances more rapidly than the other, and during the year completes one-fourth of the whole course of study. The other division completes one-sixth of the course.

During the second year the pupils in grade B are in the same room with the sixth grade. At the beginning of the year they are five months (one-half the school year) behind those in the sixth grade. After two or three months, grade B is able to recite with the sixth grade, and at the end of the year both divisions have completed one-half the course of study — the one in two years, and the other in three years. The plan for the last half of the course is the same as for the first half, the grades being known as the seventh, eighth, and ninth in the one case, and as C and D in the other.

There are also two ways of completing the course in five years: (1) any pupil who has completed one-half the course in two years may at the end of that time be transferred to the seventh grade, and finish the course in three years; (2) any pupil who has completed one-half the course in three years may at the end of that time be transferred to grade C, and finish the course in two years. In both cases these changes can be made without omitting or repeating any part of the course.

It is now eleven years since the schools were first classified on this plan. During this time five thousand nine hundred twenty-six pupils have graduated from the grammar schools. Of this number 8 per cent completed the course in four years, 29 per cent in five years, 48 per cent in six years, and 15 per cent in seven years or more.

Of the number who entered the Latin school during the past eight years, 16.3 per cent did the work in the grammar schools in four years,

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Arrow No. 1 indicates the four years' course; grades A, B, C, D. Arrow No. 2 indicates one of the five years' courses; grades A, B, 7, 8, 9. Arrow No. 3 indicates the other five years course; grades 4, 5, 6, C, D. Arrow No. 4 indicates the six years' course; grades 4, 5, 6, 7, 8, 9.

46.4 per cent in five years, and 37.3 per cent in six years. Of those who entered the English high school and took the general course, 10.7 per cent did the work in the grammar schools in four years, 41.2 per cent in five years, and 48.1 per cent in six years; of those who took the commercial course in the English high school, 8.6 per cent did the work in the grammar schools in four years, 37.8 per cent in five years, and 53.6 per cent in six years. Of those who entered the Rindge manual training school, 6.5 per cent did the work in the grammar schools in four years, 36.1 per cent in five years, and 57.4 per cent in six years.

During the past eight years, more than 50 per cent of the pupils entering the high schools did the work in the grammar schools in less than six years, 41.2 per cent doing it in five years, and 11.3 per cent in four years. It does not follow, however, that because so many did the work in less than the full time, the plan is a good one. Its value is shown rather, by the thoroughness with which the work has been done, not in one year only, but in a series of years. The results of the first year's work in the high schools would seem to be a test of this thoroughness. The records in these schools show that for eight years the average per cent of the pupils who were four years in the grammar schools was higher than for those who were five years in the grammar schools, and that the per cent of those who were five years in the grammar schools was higher than for those who were six years in the grammar schools.

The average per cents of the first year's work in the different high schools for eight years are as follows:—

In the Latin school, the average per cent of the pupils who completed their grammar school work in four years is 79.7; of those who completed it in five years, 75.1; of those who completed it in six years, 70.6.

In the general course of the English high school, the average per cent of the pupils who completed the grammar school work in four years is 78.4; of those who completed it in five years, 75.7; of those who completed it in six years, 73.1.

In the commercial course of the English high school, the average per cent of the pupils who completed the grammar school course in four years is 73.5; of those who completed it in five years, 72.1; of those who completed it in six years, 70.3.

In the Rindge manual training school, the average per cent of the pupils who completed the grammar school work in four years is 77.3; of those who completed it in five years, 68.2; of those who completed it in six years, 67.3.

The following tables will be of interest as showing the results of the first year's work in the high schools of eight classes:—

IN THE LATIN SCHOOL.

Record of Eight Different Classes	Four Years in Grammar Schools	Five Years in Grammar Schools	Six Years in Grammar Schools
First Year in High Schools	Average per cents in High Schools	Average per cents in High Schools	Average per cents in High Schools
Class of 1895.....	78.7	78.9	76.4
Class of 1896.....	80.4	77.0	71.6
Class of 1897.....	79.3	72.5	66.9
Class of 1898.....	77.1	72.3	67.8
Class of 1899.....	80.0	73.0	61.8
Class of 1900.....	81.1	75.9	75.4
Class of 1901.....	79.6	75.2	70.1
Class of 1902.....	81.0	77.5	74.7

IN THE ENGLISH HIGH, GENERAL COURSE.

Class of 1895.....	77.3	76.2	73.4
Class of 1896.....	85.9	75.1	76.4
Class of 1897.....	79.7	78.7	72.2
Class of 1898.....	77.6	75.8	77.0
Class of 1899.....	75.6	75.1	69.1
Class of 1900.....	79.2	73.4	71.1
Class of 1901.....	72.8	75.2	73.2
Class of 1902.....	82.2	75.3	74.3

IN THE ENGLISH HIGH, COMMERCIAL COURSE.

Class of 1895.....	73.7	73.5	69.8
Class of 1896.....	74.8	70.9	68.4
Class of 1897.....	76.3	69.0	69.3
Class of 1898.....	75.7	73.8	69.5
Class of 1899.....	69.5	68.5	68.9
Class of 1900.....	69 2	73.6	72.5
Class of 1901.....	76.0	73.6	70.5
Class of 1902.....	74.9	75.5	73.3

IN THE MANUAL TRAINING SCHOOL.

Class of 1895.....	72.6	65.4	65.9
Class of 1896.....	79.3	63.5	65.2
Class of 1897.....	78.6	67.2	61.7
Class of 1898	81.7	69.5	68.9
Class of 1899.....	....	67.5	67.8
Class of 1900.....	72.6	69.6	68.0
Class of 1901.....	80.0	67.8	68.4
Class of 1902.....	80.4	71.9	69.2

The results already given are based on the first year's work in the high schools. For the second time results have been obtained based on the full course in the high schools. Last June sixty-two pupils were graduated from the Latin school. Of this number, forty-five were graduates of the Cambridge grammar schools. Of these forty-five, five did the work in the grammar schools in four years, and their average per cent for the Latin school course was 83.2; twenty-seven did the work in the grammar schools in five years, and their average per cent for the Latin school course was 77.0; twelve did the work in the grammar schools in six years, and their average per cent for the Latin school course was 76.3; one was seven years in doing the work in the grammar school, and her average for the Latin school course was 66.7.

Eighty-six pupils were graduated from the English high school last June. Of this number, seventy-six were graduates of the Cambridge grammar schools. Of these seventy-six, nine did the work in the grammar schools in four years, and their average per cent for the high school course was 75.7; twenty-seven did the work in the grammar schools in five years, and their average per cent for the high school course was 75.1; thirty-four did the work in the grammar schools in six years, and their average per cent for the high school course was 74.7; six were seven years in doing the work in the grammar schools, and their average per cent for the high school course was 74.3.

These results do not indicate as thorough preparation for high school work as is desirable, but they do show that there are some pupils who can do the same amount of work as others in less time, and do it as well or even better. If it is said that the pupils who spent only four or five years in the grammar schools should have remained longer, it would be equally true that the time should have been lengthened for those who had been in these schools six years.

PRIMARY SCHOOLS.

The number of pupils in these grades on the first of December was five thousand eight hundred twenty-five, and the number of teachers was one hundred forty.

The cost of instruction for each pupil for the year has been $16.95. This does not include the cost of supervision or the cost of the Wellington school.

For non-resident pupils the tuition is $20 a year, payable in advance,—one-half at the beginning and the other half at the middle of the school year.

The course of study is for three years. Children five years old are

admitted to the first grade at the beginning of the school year and during the first week in March. Pupils qualified to join existing classes may be admitted at any time on application to the principal. At the present time, 41 per cent of the pupils are in the first grade, 31 per cent in the second, and 28 per cent in the third.

One thousand four hundred sixty pupils graduated last June at an average age of nine years six months. Of these, 5 per cent completed the course of study in less than three years; 62 per cent in three years; 4 per cent in three years and a half; and 29 per cent in four years or more.

Promotions from grade to grade in the primary schools, and from the primary to the grammar schools, are made by the primary teachers, under the direction of the supervisor of primary schools and the superintendent. Promotions by classes are made annually at the beginning of the autumn term; but individual promotions are made at other times if it is deemed expedient by the supervisor of primary schools and the superintendent.

Pupils are promoted to the grammar schools on trial, and those who show by their work that they are unprepared are returned to the primary schools on the approval of the supervisor of primary schools and the superintendent.

Once a month the teachers of each grade meet the directors of special studies and the supervisor of primary schools. These meetings are held in the English high school building on Wednesday afternoons, half an hour after the close of the schools. The work for the coming month is planned; criticisms and suggestions in regard to methods are made; and questions from the teachers are answered and discussed.

Occasionally specimens of written work from all the pupils are brought for examination. In this way the amount of work done in the schools is made somewhat uniform; new teachers are kept informed as to the requirements, and pupils lose less time when a change of teacher or school becomes necessary.

The supervisor of primary schools writes in regard to primary reading, absences from school, and the stamp savings system, as follows:—

While realizing the value of the grade reader in the systematic teaching of a vocabulary, there is a growing feeling that the mechanics of reading can be taught with the aid of a few carefully selected readers, and that more time should be spent in the reading of books which give special information or have a claim to be classed as standard literature. Single sets of such books have been placed in the primary schools for the use of any grade or group of children who have acquired the power to read them with profit.

A careful study of the conditions which prevent children, in spite of faithful teaching, careful grading, and every facility for individual promotion, from completing their primary course in three years, shows that a large number of those who fail of promotion have lost time in the first grade by frequent absences during the year, which are not due to contagious diseases or to those common to childhood. Another cause may be the large number of children over ten years of age in the second or third grade whose necessities seem more urgent than those of the younger children, and who, for this reason, take most of the time which the teacher can spare for individual instruction. Were some way provided by which these children, who are too old for the associations of the primary grades, could be taught in ungraded classes, much time would be saved for the benefit of the younger children. The best remedy would be for parents to realize the importance of a year in the early part of a child's life. It counts for as much time as in the higher grades. "There are bricks at the top of the tower, there are bricks at the bottom of the well — yet both are bricks."

A system of stamp savings in connection with the schools was begun in May, 1897. There are at present nine stations in the primary and grammar schools, with a sub-station in one of the kindergartens. During this time there have been five thousand five hundred depositors, of whom one thousand five hundred fifteen still remain on the lists. The deposits aggregate $7,355.98, of which $1,437.91 has been added this year.

Much of the money is withdrawn before the end of the year, but usually for necessary expenditures sanctioned by the parents. The capital required to care for these stations has been furnished by various organizations and individuals, and the collections are made by members of a committee who work directly with the children.

The chairman of the committee on stamp savings, Miss M. L. Drew, writes in her report as follows: —

It is the first aim of the committee that the stamp savings work shall lay no additional burden upon the teachers, but rather that, while serving the children directly, it shall add something of interest to school attendance, and help indirectly in the order of the schoolroom. It is interesting to note how important a part the personal element plays in this work, especially the personal enthusiasm and encouragement of the teacher. By a careful comparison of actual figures, it is found that where, for one reason or another, the regular routine is disturbed, there the interest among the little savers lags and savings grow less. On the other hand, if an interested teacher occasionally reminds his children of "bank day," or speaks an approving word on the project, or himself saves with the children, increased returns are sure to follow.

KINDERGARTENS.

There are fourteen kindergartens. The number of pupils on the first of December was seven hundred twenty-two, and the number of teachers was twenty-five.

The cost of instruction for each pupil for the year has been $26.17. This does not include the cost of supervision.

The following in part is from the report of the committee on kindergartens: —

Miss Harriette E. Ryan, principal of the Shaw kindergarten, has been granted a year's leave of absence for study, and Miss Leonice S. Morse, the assistant, is acting principal. Miss Della E. Cabot has been appointed assistant for the school year. Mrs Ellen A. Watson resigned from the Willard kindergarten and Miss Alice V. McIntire, who had been acting as principal, has been appointed to the position. Miss Anna M. Gage has been made assistant.

To be eligible to the position of teacher in a kindergarten a person must now have had a course in a high school, a course in a kindergarten normal school, a year's experience in teaching in a kindergarten or a primary school, and must be able to play the piano.

To meet the new requirements of a year's experience, a class of kindergarten graduates was received as members of the Wellington training school, and placed in the first primary grades and kindergartens in other schools to help the regular teachers, and to act as substitutes when needed in the kindergartens.

The number of applicants for positions in kindergartens far exceeds the number of places to be filled. An opportunity is now given for kindergartners to get experience in primary work and thereby become eligible to an appointment to the first grade of a primary school.

Students in kindergarten normal classes are given opportunities to observe during their two years' course, and are allowed one month's experience in the first primary grade, but it is not deemed expedient for them to observe after graduation.

Teachers in kindergartens are to use their afternoons in visiting the homes of their pupils, with a view of maintaining friendly relations with the parents and of securing regularity of attendance, except when the time is needed for preparation for their work, and they are to make monthly reports on blanks prepared for the purpose. The average number of visits made by both principal and assistant to homes of children is about one hundred fifty.

There is special need of a new kindergarten in the Parker school. This school is cut off from the rest of the city by the tracks of the Grand

Junction R. R., and many mothers who would send their children as far as the distance to the nearest kindergarten, fear the danger of the crossings.

The number of children on the waiting list of our several kindergartens is so large that the committee deem it wise and expedient to hold afternoon sessions in two of the kindergartens already established.

The mothers' clubs are so well established that some of them are seeking to extend their work. The club connected with the Riverside school and kindergarten supported last summer a vacation kindergarten for four weeks. Another club interested itself in the school for crippled and deformed children; and all the clubs show in many ways the deep interest which they feel in the welfare of the kindergartens with which they are associated.

The Cambridge kindergarten association, composed of the kindergarten teachers, meets once in two months. At each meeting a paper is read on some important educational subject.

The following taken from the report of the Board of Education to the commissioners of the District of Columbia, will be of special interest to those who are seeking information in regard to the scope and purpose of the kindergarten system : —

"It is vastly important that the child at a period when impressions are most vital and lasting should see life not as so many detached wholes — a little piece here, another unrelated there — but as one great whole, made up of members interdependent and interrelated.

The kindergarten programme begins with the family, the first institution into which the child enters, and leads out from the known to the unknown. From the human family it is but a step to its natural analogue, the families of a lower order in nature, and the child sees his own life reflected in the nurturing care of the mother bird for her young. He is led to notice the different kinds of homes in nature. Various nests are brought into the kindergarten and seed homes of many kinds. Songs, stories, games at this time relate to the family and to the child's new experience of separation from and return to his home. No conscious appeal is made to the child which would force these thoughts home by any well-drawn comparison. He is left to draw the conclusion himself, to perceive that families and groups exist in nature and that each created thing has its appointed place of habitation. From the family we lead out into the larger whole, the great institution of labor or civil society, relating this institution to the former, for it is here that we find the helpers of the family. Under this head are presented the activities of the working world which touch the child's life and which are therefore of interest to him. Farmer, miller, and baker are presented in turn, and the children

have the actual experience of making butter and bread and of visiting a bakery. At Thanksgiving they are taken to the market, that they may see the bounty of nature, the fruits of man's industry, how each is working for all and all for each. In each kindergarten room this year a corner was arranged with fruits, grain, and autumn flowers, and thus the simple Thanksgiving hymn was full of richest meaning and a real feeling of gratitude stirred toward God, the giver of all. An opportunity to become a bestower as well as a receiver of gifts is given by the Christmas festival, when each child makes a simple offering of his own work for those in his home.

After the holidays the new year itself is made the point of departure, and inasmuch as the new year is a period when new resolutions are formed, we lift up into a conscious place the virtues of punctuality and order, virtues which are distinctly necessary for the preservation of the social order and which arise out of that relationship.

As the mission of the kindergarten is to awaken the elementary ideas and affections and to arouse the impulse to work from within, we do not wish the children to see order as an iron rule, external, compulsory, but as the 'kindly law which guides the universal round.'

Children are never allowed to be tardy in kindergarten. There is a stated time for each exercise. Materials are always ready for use before the children assemble, and in every detail, however small, they are led to observe 'the reign of order.'

As light is the great revealer of order in the universe, and as the heavenly bodies mark the divisions of time, we next present the songs of light, the sun, the moon, and stars.

No abstract astronomical facts are taught. Questions are answered correctly, so that false ideas may be dispelled and the children started along the paths of accurate thinking. Our object is to stir the wonder, the interest; to stimulate the desire to know; to give seeing eyes.

February, with its birthday of our national hero, gives us the State for our point of departure, and our programme begins with those who render lowly service and leads up to the personal hero, George Washington. It includes the knight or ideal soldier; soldier games and songs; flag songs, and, whenever possible, a visit to the Capitol, that the children may feel the greatness of our country under its wide-spreading dome. They learn to love the flag and to carry it with care; patriotic stories and exercises are given, and thus the germ of truest citizenship is implanted.

The spring months are filled with the glad awakening of life, which is shown by varied illustrations and from many different standpoints. The awakening of the butterfly, the birth of the seeds, the return of the

birds and nest building, and the growth and evolution of life everywhere. Through the doorway of this returning life in nature, which finds its highest expression in the festival of Easter, we reach the climax of our programme in the song and old-fashioned picture of the church, taken from Froebel's Mother Play. This picture is supplemented by modern illustrations of churches and cathedrals, furnished by the teachers or brought by the children.

The weeks which follow complete the cycle of the year's programme by returning to the thought of the home in the nest building of the birds, the work of the carpenter or home builder, and finally closes with the making and furnishing of tiny homes by the children.

From this necessarily brief sketch it will be seen that the work of the year is an organic whole and the outline plan logically related to this whole; that the daily programme is not a hit or miss scheme of teaching or amusing children too young for the primary grades, but that it is the result of definite, carefully prepared lessons, intended to develop a comprehensive, educational plan."

SPECIAL STUDIES.

The committee on special studies has the supervision of the instruction in nature study, drawing, music, physical training, and sewing.

NATURE STUDY.

The work in nature study includes the study of plant and animal life with some study of minerals and of weather phenomena.

The study of plants was first undertaken, and still makes up the larger part of the work. The study of animal life consists mainly of lessons on insects and birds. The mineral work is confined to lessons on common metals and on building stones.

Plants are studied in grades one to four inclusive; insects in grades one and two; birds in grades three and four; weather phenomena in grades one to three inclusive; and minerals in grade four only.

Specimens chosen for study are those in which the pupils have a present interest, and all work is based on present experience. It is kept well within the capabilities of children, yet novel enough to require their best effort. Wherever it can be made to blend with other lines of school work, this is done.

The results sought are increasing knowledge of facts gathered by observation; familiarity with environment; and a growing sympathy with nature.

The following is from the report of the director of nature study to the supervising committee: —

One year ago the course in nature study was revised to meet new conditions and new requirements. The course as revised has been used unchanged this year.

In September the pupils of the first grade studied the wild flowers which they were able to find; in October, the autumn leaves; in November, the fruits found in near-by markets; in December, the evergreens. These gave place in the spring to buds and seeds, and later to the early wild flowers.

The second grade reviewed and extended the work of the first year, finding new specimens and new facts in regard to them.

The third grade was able to do more thoughtful work, grouping and comparing the specimens studied. In the grammar grades some study of minerals during the winter, and of birds and their nests in spring and fall was introduced.

All lessons have been arranged with reference to the changing seasons, and all specimens used have been those appropriate to the time of year. In each month, one thought has been made a centre about which to group all the lessons of the month. This thought changes with the grade, so that there is no sameness in the work. Each lesson is based on one that has been given, and leads up to one that is to follow. There is, therefore, a sequence and a grading in the work.

Efforts are made to bring material for nature study nearer to the pupils in their home and school life. Plants growing in the schoolrooms, window boxes at the windows, and gardens in the school yard are helps toward this end. The habit of examining specimens is being formed in the pupils. Even in the entering classes we find evidences of work done in imitation of older brothers and sisters. More voluntary work outside of school is undertaken. There has been a marked increase in the number of gardens planted and cared for at home, and in the number of specimens brought in after a country visit. Much of the best work has been done by classes that have been taken out of doors for their nature lessons. The number of such classes has been increased each year. The habit of studying and enjoying nature is becoming fixed among the pupils.

DRAWING.

The course of instruction in drawing in the primary and grammar grades includes, form, color, and designing.

The study of form, by means of type models and drawing, is begun

in the first primary year, and is succeeded in the grammar grades by object drawing, drawing with instruments, and drawing from nature. This last subject receives especial attention during the spring and autumn months.

Color is studied in all the grades, colored tablets being used in the primary grades and water colors in the grammar grades. Harmony and mixing of colors are treated as a science in special exercises; while color skill is artistically expressed in original designs, historic ornament, and nature study.

In design, attention is given both to construction and decoration, embracing a large variety of subjects.

In the English high school, drawing is a required study the first year, and is carried forward upon a plan of which the following is an outline: —

Drawing from objects and from casts, drawing from nature of plant form, drawing to scale, designing (constructive and decorative), and color harmony.

Drawing, designing, or water-color painting, may be taken as an elective study after the first year. The course of lessons includes landscape, still-life, and advanced designing.

In the English high school, the instruction in drawing is given by the director of drawing and his assistant. In the primary and grammar grades, it is given by the teachers under the supervision of the director and his assistant.

In the Rindge manual training school, there are two teachers of drawing, one of mechanical drawing, and the other of free-hand, and the work is done under their immediate instruction.

The following is from the report presented by the committe on special studies: —

Mr. Roos, director of drawing, reports that since the Board abolished the use of drawing books, there has been a steady development in practical exercises in form drawing, in color study, and in correlated drawing and designing. That the present course is well adapted to the growing powers of the children is proved by the work shown in the schools and school exhibitions. The teachers have without exception labored intelligently and faithfully to make the work a success.

He recommends that in the new schoolhouses, and, if possible, in those now in use, a room on the upper floor having ample light from one direction, preferably from the north, shall be set apart for drawing for all the classes in the school, and that here may be gathered specimens illustrating art, with instruments and materials to be used in this branch of study.

Mr. Roos meets a class of teachers for art study at the English high school every Monday evening during the time of the sessions of the evening schools. The class numbers sixty-two this year, an increase of nine over last year. This furnishes opportunity for improvement in methods of instruction. He recommends that a diploma be given to members of this class on the completion of prescribed courses.

The committee calls attention to the admirable course in art study prepared by Mr. Roos by means of the cyclostyle, and furnished to the teachers almost without cost to the city. A copy of this course can be seen at the office of the secretary of the Board.

The director of drawing not only supervises the work of the evening schools but is present during the sessions of these schools. Miss Lucia N. Jennison, assistant in drawing, supervises the work in the primary schools, and teaches classes in the English high school Wednesdays and Thursdays.

MUSIC.

Instruction in music by the National or Mason system is given by the regular teachers in the primary and grammar grades under the supervision of the director of music and his assistant. In the high schools it is given by the director. Every pupil who is capable of learning to sing is required to give attention to the subject.

In the Latin school and English high school, forty-five minutes a week are given to the study of musical form and expression as found in choruses, quartettes, etc., from the standard operas and oratorios. Elementary harmony, counterpoint and composition have been introduced as elective studies for the second and first classes, and boys as well as girls having a special aptitude for music are the ones who naturally elect these studies, the only requisite being some knowledge of the pianoforte.

The students are instructed in scale formation, intervals, a logical and comparative view of all true chords, in order to give them the power to construct and resolve these chords for themselves.

The study of harmony is carried well into modulation, and of counterpoint through four simple orders or species, including both the major and minor modes. Harvard College has recently passed a vote allowing a knowledge of harmony to count in an entrance examination to the Lawrence Scientific School.

Two periods each week are devoted to instruction, and occasionally the best compositions of the students are sung or played before the entire school; in this way showing the practical side of the work which will prove an important factor in future teaching.

In the Rindge manual training school the young men are taught to

sustain their parts unaccompanied, in compositions of four-part harmony, (first tenor, second tenor, first bass, and second bass) the music being selected and arranged from the standard oratorios, operas, and part songs. Forty-five minutes a week are given to the subject, as in other schools.

Fifteen minutes a day in primary, and ten minutes a day in the grammar grades, are devoted to this study ; and pupils in the grammar grades are taught to sing and sustain their parts in reading compositions in two, three, and four parts.

Memorizing music is a feature in all the grades, including the high schools, and in all graduating exercises it is expected that the music by the pupils will be sung or played without notes. To this end rote singing in all the schools forms a part of the instruction in reading music.

The committee reports that the work in music has continued along the same lines as in previous years. Miss Georgia E. Martin has been appointed to aid the director of music in the primary grades, and to his duties has been added the instruction in music in the Rindge manual training school, Mr. Briggs, who had taught music in that school since 1894, having resigned.

PHYSICAL TRAINING.

The Ling system of physical training is used in the primary and grammar schools. Seven grades are regularly supervised, the classes of the eighth and ninth grades being supervised only when special request is made by their teachers.

Ten minutes are given each day to the work in the grammar grades and fifteen minutes in the primary grades. The instruction is given daily by the regular teachers in the different class rooms, under the supervision of the director of physical training, who visits each schoolroom as often as time will permit, and who also meets the teachers for special directions from time to time.

During the months of September, October, November, April, May and June, the primary classes have the privilege of out-of-door recesses, gymnastics forming a part of the daily programme during December, January, February, and March only.

Games and marching are freely used until the third year, when a stronger emphasis is placed on formal gymnastics. Games are also frequently used in the lower grammar grades.

The essential aim of the teaching is to make the period one of healthful exercise and recreation, and also to counteract in part the

tendency to spinal curvatures and flat chests caused by sitting so many hours a day at the school desks.

The following is from the report of the director of physical training to the supervising committee: —

Very few changes have been made during the past year in the matter of seating the pupils in a more hygienic manner. The few conspicuous cases where a large percentage of the pupils in the class was uncomfortably seated have been remedied.

It is a matter of regret that a number of classes in the new Washington school are obliged to use furniture of a very old style, renovated, it is true, but too large for many of the occupants. The new building itself, however, is a model in respect to light and fresh air.

For the third time I report the inadequate provision for lighting the rooms of the Stearns school occupied by grades two and three. These rooms are in the front of the building having windows on either side but none on the front or back. On either side is a high brick structure effectually shutting out nearly all the light from the lower rooms on a dark day. For the sake of the health of the children obliged to sit in these rooms and strain their eyes during the dark winter days, it is hoped that some action to remedy this will soon be taken.

Out-of-door recesses have been a part of the daily programme in nearly all the primary schools from the first of April to the first of December. The teachers report that the pupils return to work with freshness and renewed zeal after these few minutes of freedom in the air and sunshine.

The following facts are also gathered from the report: —

During the months when the primary schools have out-of-door recesses, the director of physical training is able to give ten-minute lessons every two weeks to the grammar grades, instead of longer lessons once in five weeks, which is all that is possible at other times. She finds that the more frequent and briefer lessons are more satisfactory to teachers and pupils.

Through the kindness of Miss Homans, director of the Boston normal school of gymnastics, five of our teachers have the benefit of instruction in that school one hour each week without charge.

A public demonstration of the work in gymnastics was given at the Latin school gymnasium in May by pupils from the sixth grade, two pupils being selected from each class of that grade. An audience of about three hundred witnessed the exhibition, which was enjoyed by the children as well as by their elders. Demonstrations have been held before the teachers in six of the schools, and others are to be given. It is proposed to hold another public demonstration in March, when it is hoped that the sixth and seventh grades will be represented.

The work in all the schools is running more smoothly than at any previous time; teachers and pupils are showing increased interest and desire for better results.

The director makes the following recommendations: — (1) That modern, adjustable furniture be purchased to replace much of that now in use. (2) That all new buildings have a large room on the ground floor for gymnastics and games. (3) That the "Day's Orders" be printed in a convenient form for the use of the teachers. (4) That an increase of five minutes per day be allowed for gymnastics, so that seventy-five minutes a week, instead of fifty minutes, may be devoted to this subject. (5) That more frequent visits be made by the school committee during the period devoted to gymnastics.

SEWING.

Sewing is taught to the girls of the three lower grades in the grammar schools, and to the boys of the fourth grade who desire the instruction. Forty minutes are given to the work once a week in each grade. All the boys are learning to sew, the regular teacher having oversight of their work. The first lessons in sewing are spent in learning the use of the thimble and needle, in threading the needle, making knots, and fastening ends. Running stitches are made during this time on ruled pieces of cloth. Neatness is insisted upon from the beginning. Stamped patterns of stars or circles are worked in running stitch by the more forward. Then basting by measure is taught. Measuring cards are provided for this, and the stitches are made one-half inch in length, with spaces of one-eighth of an inch. All work is upon practice pieces, with colored thread. The first piece has three lines for running stitches and two for basting.

The second practice piece is of double cloth and has two lines of basting. On this piece stitching is taught, the children imitating machine stitching as nearly as possible. Two lines are done by all, and four lines by the best sewers, who also stitch their initials in the centre.

For the boys' sake, buttons are brought from home to be sewed on. Strips of cloth for this are basted by those who finish stitching before the others. The shoe button comes first as the simplest, then the two-holed button, then the four-holed. This is the kind of sewing most liked by the boys.

Those who first finish buttons baste strips for overhanding. This is the last stitch taught in this grade. Those who wish, bring pretty pieces of cloth and make pin-balls. The boys who finish their other work in time for this make excellent ones. At the end of the year the boys take home all their work. The girls keep theirs for reference the next year.

The work in the fifth grade begins with folding and basting the model pillowcase. All overhanding strips left unfinished the previous year are finished now, and the pillowcase overhanded. To save time, overcasting is taught directly upon the pillowcase. Folding and basting hems is taught upon a practice piece, a half inch hem on one edge, and a quarter inch hem on the other. On the pillowcase an inch hem is used. After the practice piece, the pillowcase is hemmed and taken home to be washed and ironed. The good sewers are able to complete this in half a year. The next work is making a model apron of calico. The rule for gathering is copied upon paper, and then practiced upon cloth with attention to proper position of the hands. Stroking gathers follows, and the rest of the year is required for making the model apron. Those who finish the year's work take home all practice work of the two years. For extra work the girls learn hemstitching. Occasionally large pillowcases are made by those who sew rapidly, but the work required demands all the time of the average child.

During the first term in the sixth grade those who completed the fifth grade work are taught to make buttonholes, while the others finish their model aprons. After vacation all begin together upon darning on canvas. This being finished, they learn to run a thin place in stocking material, and then to darn a hole. When the darning is finished, buttonholes are taken up again, and then matched patching. Those who have time for extra work practice feather stitching. Throughout the course great care is taken in securing the ends of the thread in beginning, joining, and fastening off. The work now requires the services of two teachers besides that of the director.

The following is the course in sewing: *Fourth Grade.* Running, basting, stitching, sewing on buttons, overhanding, and making pin balls. *Fifth Grade.* Hemming, overcasting, model pillowcase, gathering, stroking gathers, and model apron. *Sixth Grade.* Buttonholes, darning on canvas, darning a thin place in stocking, darning a hole in stocking, and matched patching.

SCHOOL LIBRARIES AND THE PUBLIC LIBRARY.

The English high school has a library of about three thousand volumes. The Latin school has only about one-third of this number. Comparatively few books of a miscellaneous character have been added to these libraries for several years, the public library meeting the demand for such books. The need of the schools is for books of reference and for sets of books for class study.

The grammar schools, with the exception of the Morse and Webster, are not supplied with books for general reading. These are obtained from

the public library, and during the year six thousand thirty-five books have been delivered to the schools. Last year the number was nearly nine thousand. The following from the report of the librarian to the trustees of the Cambridge public library shows why the number is less than last year : —

"The decreased appropriation made for the library in the budget of this year, after we had already lived several months on the basis of last year's expenditure, necessitated a reduction in our expenses and resulted in the closing of our local delivery stations.

As the delivery of books did not cease until the end of May, the schools were not materially affected until the beginning of the present term. An arrangement has recently been made for sending books to the schools by express once in two weeks, and the expense is borne by the school board. It should be a source of great gratification to us that the school work can go on, even though under somewhat less favorable conditions ; for the total severance of relations between the schools and the library would be the greatest misfortune that could result from the abandonment of outside deliveries."

The educational value of the public library is well stated in the following paragraph from the report of the trustees for the past year : —

"The library is an important part of our educational system. Its scope is broader and its clientage larger than those of the public schools. No institution supported by the money of the people is more democratic, in the best sense of the term. Its advantages are free to every man, woman, and child who can read. It is a supplementary department of every school, public or private, in the city, from the lowest grade to the highest, — a school for the teachers as well as the pupils. It is the high school for those who cannot continue their studies beyond the grammar school, and for those of mature age who had few opportunities for school training in their early years. It is the evening school, open every day, Sundays not excepted, for those who cannot attend the regular evening schools on account of their fixed hours and courses of study. It is the industrial school for the working man who has no other means of self-culture in his special craft. Its advantages are eminently for those who are least able to get them elsewhere,— who can buy few books and take few periodicals, but are here supplied with both in abundance ; and the cost of it is paid almost entirely by those who are least dependent upon its resources."

EVENING SCHOOLS.

The following account of the evening schools is given by Mr. Hubbard, the agent of the school committee, who has the general supervision of these schools : —

There are seven evening schools — two drawing schools, one high school, and four elementary schools. In accordance with the rules of the school board, there are two terms of the evening schools. The first term begins on the second Monday of October, and continues every Monday, Wednesday, and Friday evening until the end of the week before Christmas. The second term begins on the first Monday, Wednesday, or Friday evening after the opening of the day schools in January, and continues thirty-five evenings. The sessions begin at half past seven and continue two hours. No session is held on the evening of a holiday, or during the vacations of the day schools.

The evening drawing schools are under the supervision of the director of drawing for the day schools. There are two of these schools, one for instruction in mechanical drawing, which occupies four rooms in the Central Square building, and one for instruction in free-hand drawing, which occupies the drawing room in the English high schoolhouse. In the mechanical school two courses are provided, — a three years' course in machine drawing, and a three years' course in architectural drawing. In the free-hand school provision is made for a three years' course in free-hand drawing. Diplomas are given to graduates of either course.

The evening high school is held in the English high school building, and offers a three years' course of instruction in the following subjects : arithmetic, bookkeeping penmanship, English composition, English literature, civics, history, algebra, geometry, stenography, Latin, French, and German. Diplomas are granted to graduates of the three years' course.

The elementary evening schools occupy rooms in four of the grammar school buildings, the Putnam, Roberts, Shepard, and Webster. Reading, writing, arithmetic, geography, language, history, and bookkeeping are taught in these schools in classes, so far as classification is possible, but a large part of the work is individual. No definite course is arranged, but an opportunity is offered to pupils to prepare to enter the evening high school, and certificates of admission are given to those who are qualified to begin the work in that school. In addition to the subjects given above, classes in civil service, sewing, wood working, and mechanical drawing are formed when a sufficient number express an intention to take any one of these courses.

The following table shows the attendance of the evening schools for the year 1901–1902 : —

	Number Registered	Average Attendance	Average No. of Teachers*	Average No. of Pupils to a Teacher.	Number of Graduates
Mechanical Drawing...	140	76	4	19	15
Free-hand Drawing....	80	38	2	19	7
High School.....	364	162	9	18	14
Allston School.....	374	127	11	11	28
Putnam School.....	278	85	8	11	10
Shepard School.....	189	61	6	10	17
Webster School.....	162	75	6	13	12
Total	1,587	624	46	14	103

* The principals and curators are not included in these averages.

The following table shows the cost of the evening schools for the year 1901–1902 : —

	Cost of Instruction	Cost of Text-books and Supplies	Cost of Light, Fuel, and Janitor	Total Cost	Cost per Pupil
Mechanical Drawing...	$868 00	$76 79	$208 38	$1,153 17	$15 17
Free-hand Drawing....	430 00	35 69	74 17	539 86	14 21
High School.....	1,682 75	101 90	685 63	2,470 28	15 25
Allston School	1,122 50	151 36	317 73	1,591 59	12 53
Putnam School.....	878 00	49 08	311 51	1,238 59	14 57
Shepard School.....	597 00	21 53	152 85	771 38	12 65
Webster School.....	621 00	9 06	212 93	842 99	11 24
Total	$6,199 25	$445 41	$1,963 20	$8,607 86	$13 79

The above table shows that the total registration of the evening schools during the year 1901–1902 was one thousand five hundred eighty-seven, an increase of one hundred eight over that of the preceding year, and the average attendance was six hundred twenty-four, an increase of sixty-three. This shows that the average attendance is about 40 per cent of the registration, an increase of about 2 per cent above that of the preceding year.

The total cost of all evening schools has been $8,607.86, an increase of $109.14 above that of last year, but the cost per pupil was $13.79, a decrease of $1.35 per pupil on the average attendance.

The fire in the Allston schoolhouse occurred December 12, 1901, breaking up the evening school for a time and thus reducing the average

attendance, but the school was soon reorganized in the Roberts school building where it still holds its sessions.

During the first term of the schools for 1902-1903 the total registration to December 1 was one thousand six hundred eighty-seven, an increase of one hundred seventeen. The average attendance was nine hundred eighty-one, an increase of ninety pupils, with an average of fifty-four teachers, or of two more teachers than last year.

At the meeting of the Board in June the salaries of teachers in the evening schools were fixed as follows:— Principals of the mechanical drawing and of the evening high school, $4.00 per evening. Principals of elementary evening schools, $3.00; teachers in the drawing schools, $3.00; teachers in the high school, $2.00, and teachers in the elementary schools $1.50 per evening.

The committee on evening schools has adopted a rule that only experienced teachers shall be appointed to teach in these schools.

The lines of work of last year have been pursued this year successfully. Classification has been extended with decided advantage, and the schools are in excellent condition as regards attendance and interest in the work.

Recently an experiment has been tried in the Allston school with the purpose of increasing the attendance and interest in the school as well as giving instruction to its members. The last hour Friday evenings has been devoted to lectures, by citizens who were willing and well qualified to assist in the work. Dr. Putnam gave a lecture on "First Aid to the Injured", Mr. Bates, on "Citizenship", Dr. Bicknell, two on "Down in Dixie." Most of these lectures have been illustrated with the stereopticon. Mr. Getchell, the principal, has arranged with several other gentlemen to give lectures on various topics. The members of the school evince much interest in this line of instruction which is being employed in many cities in connection with evening school work.

The recommendation of the committee of last year that the Rindge manual training school be opened evenings for instruction to young men who are engaged in mechanical pursuits has not been acted upon. It seems a neglect of a valuable opportunity that this fine and costly plant should not be fully utilized for the benefit of our young men, many of whom were compelled to leave school at an early age. Opening this school for evening work would be of great advantage to such persons. For some years the city of Springfield has maintained what they term "Evening School of Trades" in which instruction is given in mechanical drawing, machine-shop practice, tool making, plumbing, joinery, wood turning, pattern making, mathematics for mechanics, with a lecture course in magnetism and electricity and some laboratory work in electricity.

That these classes are very popular is shown by an enrolment of about three hundred with the prospect of a very large increase next year if accommodations can be supplied. The Plumbers' Association has promised to give the preference to members of these classes when hiring help and the city is profited by the tools made by the class in tool making. Springfield has a population estimated at 62,000, a school population of 10,400, and a valuation of $74,338,000, and she expended for her schools $339,677 last year.

It is gratifying to note that more adults are in the evening schools this year. The attendance has been regular and the spirit of the schools earnest, though the work of the holidays has interfered seriously with the attendance during the last few weeks, as it does every year.

VACATION SCHOOLS.

The vacation schools for 1902 did not open at the usual time owing to the prevalence of smallpox in the city. About twelve hundred children expressed a desire to attend these schools, but arrangements had not been completed when the day schools were closed with only a half day's notice. Under these circumstances it was doubtful whether the vacation schools would be opened. Later it was decided to open a part of them. Classes in sloyd, cooking, and dressmaking were formed at the English high school building, and in sloyd and dressmaking at the Putnam building. The older pupils who took sloyd also had instruction in drawing, and the younger pupils in some academic study. The schools were in session from July 14 to August 20, and cost $1,016.97, or an average of $3.05 per pupil.

The following table shows the number that joined these classes and the average attendance in each class : —

Schools	Studies	Number Registered	Average Attendance
English High School	Sloyd and Drawing	96	51.6
English High School	Sloyd and Academic	91	49.1
English High School	Cooking	58	36 3
English High School	Dressmaking	72	48.7
Putnam School	Sloyd and Drawing	95	69.2
Putnam School	Sloyd and Academic	33	26.0
Putnam School	Dressmaking	96	52.1
Total		541	333.0

TRUANT OFFICERS.

Four officers are employed. The city is divided into four districts, and each officer has assigned to him the schools in one district. Among their duties are the following: to visit each school at least once a day, unless otherwise directed by the agent; to prevent children from loitering about the school premises; to notify the teachers of all cases of contagious and infectious diseases reported by the board of health; to attend the evening schools when so directed by the the agent of the Board to assist in the preservation of order, and to visit places of business where children are employed to see that none are employed unlawfully. They make all complaints for truancy, absenteeism, or school offences at the district court, attend the trials as witnesses, and take boys to the Middlesex county truant school when they are sentenced.

By the rules of the school board the work of the truant officers is done under the supervision of the committee on schoolhouses; and under the direction of this committee, it is the duty of the agent of the Board to consider all cases of truancy, of persistent violation of the rules of the school, of juvenile vagrancy, of unlawful detention from school, of neglect by parents; and of any failure on the part of pupils or parents to comply with the rules of the school committee or the public statutes relating to school attendance. It is also the duty of the agent to direct the officers to make complaints; to certify the records in these cases when presented before the district court; and to exercise such supervision of the boys who are sent by the court from Cambridge to the truant school as may be allowed under the statutes.

The following is from the report of the committee in charge of the work of the truant officers: —

The four officers have performed their various duties in an efficient and satisfactory manner. They have investigated fourteen thousand one hundred forty-six cases of absence, made two hundred forty-three visits to factories, shops, and mercantile establishments, put one hundred children into school who had failed to enter, made twenty-six complaints in court for various school offences, and have taken twenty boys to the truant school.

Of the twenty-six complaints made, twenty-two were for truancy, one for absenteeism, and three for being habitual school offenders. Five of the boys complained of were put on probation, one left the city, and twenty were sentenced to the truant school, — five for one year and fifteen for two years each. Of the twenty boys sentenced, fourteen belonged to the public schools, and six were members of parochial schools.

Cambridge had thirty-six boys in the truant school December 1, 1901. Twenty-three have been discharged, and twenty sentenced during the year, leaving thirty-three in the school. These boys have cost the city for board, clothes, transportation, etc., $1,847.10, an average of $51.31 each.

The authorities of nearly all the parochial schools have co-operated with the agent in efforts to prevent truancy and with excellent results.

The truant officers with five assistants have canvassed the city for the school census required by the public statutes. The cost of assistance in taking and recording the census was $230. This work seriously interferes with the other duties of the officers, as boys who delight in truancy seem to know intuitively when the officers are off duty, but there appears to be no other way without considerably increasing the expense of the census. The following is the summary of the school census for 1902: —

Number of children in the city between five and fifteen, boys, 7,656; girls, 7,931	15,587
Number in public schools between five and fifteen	12,324
Number in private schools between five and fifteen	2,764
Number not attending school between five and seven	199
Number not attending school between seven and fourteen	95
Number not attending school between fourteen and fifteen	205
Whole number not attending school between five and fifteen	499
Number in the city between five and six	1,892
Number in the city between seven and fourteen, boys, 5,276; girls, 5,558	10,834

It appears from statistics procured by one of the truant officers that there are eleven private schools in Cambridge, which contain three hundred eleven pupils and receive $40,020 for tuition, and five parochial schools having three thousand one hundred forty pupils; making three thousand five hundred forty-one pupils attending other than the public schools.

In connection with the subject of attendance, the agent reports that the system of reporting absences and tardiness by the schools to the agent under Section 77 of the Rules, and the system of notification by him to the parents have been continued even more generally than last year, and have been adopted to some extent by the parochial schools.

The number of first notices sent to parents or guardians is five hundred ten; the second notice has been sent to eighty-three; and the third notice, which requests the parent to come to the office, has been sent to thirty-two. The system seems to be helpful in securing regular attendance. The per cent of attendance for three years is as follows:— For 1899-1900, 91.8; for 1900-1901, 92.1; for 1901-1902, 92.8. This shows an increase of one per cent since the introduction of the present system of supervision.

Age and schooling certificates have been issued to five hundred seven children between the ages of fourteen and sixteen, an increase of one hundred twenty over last year. March 13, 1902, the legislature passed a bill requiring that all minors who are working should have a certificate from the school department of their ability to read and write. Since October, three hundred forty-two of these certificates have been issued. Certificates have also been issued to twelve who could not read English, though most of them could read in their native language. The certificates given to these require that they attend the evening schools.

CONTAGIOUS DISEASES.

In 1894 the board of health, in accordance with the request of the school committee, appointed a physician, whose duty it is to examine all cases of contagious diseases reported, and to direct the exclusion from the schools of all pupils whose presence will, in his opinion, be a menace to the health of others. He reports his action on every case to the secretary of the school committee. The physician issues all certificates authorizing such children to return to school, as provided by Chapter 496, Section II., Acts of 1898.

As a further precaution against contagious diseases, the board of health established, February 26, 1896, a system of medical inspection of children in the schools. The city was divided into six districts, in each of which a physician was appointed to visit the schools in that district. The duties of these physicians as now defined are as follows: to visit the schools subject to their inspection during the morning session of every school day; to examine such children as are indicated to them by the teacher as having complained, or as appearing to be suffering from disease; to inspect such other children or such parts of the building as they deem necessary for the protection of the pupils, examining at least one school each day; to recommend to the principals to send home immediately any pupil whom they may suspect of having any infectious or contagious disease, and also, in cases of nearsightedness or deafness of pupils, to advise the parents to have the eyes or ears of such pupils examined. On the first of each month, the physicians send a report of their work to the board of health.

Once each term it is the duty of the principal of each school to call the attention of the pupils to the following rule: —

"No pupil who has visited any apartment in which a person is, or within two weeks has been sick with smallpox, varioloid, diphtheria, or scarlet fever, shall be allowed to attend school until the expiration of two weeks after such visit."

The agent of the school committee reports that during the year 1901–1902, the following cases of contagious diseases have been reported by the board of health to the office of the agent, and by the truant officers to the schools: —

Diphtheria, four hundred seventy-eight, a decrease of two hundred seven; membranous croup, thirteen, a decrease of one; scarlet fever, one hundred seventy-nine, an increase of eighty-one; smallpox, one hundred eighty-three, an increase of one hundred seventy-eight; measles, four hundred thirty-three, a decrease of one hundred six.

TERMS, HOLIDAYS, AND SCHOOL HOURS.

The school year is divided into three terms: —

The time for beginning the autumn and spring terms, and for closing the winter and spring terms, is fixed annually at the regular meeting of the committee in February. The autumn term ends December 23. The winter term begins January 2 (or the day after that celebrated as New Year's Day).

The holidays are Saturdays; Thanksgiving day, with the preceding day and the day following; the twenty-second of February; the nineteenth of April; Memorial day; the seventeenth of June; and in addition to these, for the high schools, Commencement day at Harvard University.

The sessions of the high schools begin at 8.30 A. M., and end at 1.30 P. M. The sessions of the Rindge manual training school begin at 8.30 A. M., and end at 2 P. M. These schools have a recess of half an hour in each session.

With the exception of the Russell school, the morning sessions of the grammar and primary schools begin at 9 and end at 11.45. The afternoon sessions begin at 2 and end at 4, except during the months of November, December, and January, when they begin at 1.30 and end at 3.30. The grammar schools have no outdoor recess. In the primary schools the principal may, at her discretion, substitute an outdoor recess for the period at present devoted to physical training. The sessions at the Russell school begin at 8.30 A. M., and end at 1.30 P. M.

The sessions of the kindergartens are from 9 A. M. to 11.50 A. M.

TEACHERS, APPOINTMENTS, RESIGNATIONS.

There are now four hundred seventeen teachers in the schools, thirty-nine of whom have been appointed during the year. Twenty-five have resigned, two have died, five have been given leave of absence for rest or for some special reason, and three are absent for study or travel, under the following rule of the school committee: —"Any teacher who has served in the city for ten years, may on recommendation of the superintendent and vote of the Board, have leave of absence for one year for purposes of study or travel, and may receive one-third of his salary, provided the amount in no case shall exceed five hundred dollars."

Since the adoption of this rule in 1896, fourteen teachers have had leave of absence for a year for purposes of study or travel, — six from the high schools, five from the grammar schools, two from the primary schools, and one from a kindergarten.

The number of resignations this year is larger than usual. Six resigned to accept positions in Boston. One was appointed a teacher in the Salem normal school, four received appointments in other cities, and four were married. Two teachers resigned after long and faithful service. Mrs. Augusta G. Mirick taught in the Putnam school for twenty years, and subsequently in the Gannett school for six years. Miss Sarah E. Stewart became a teacher in the Dunster school in 1867, and in 1870 was transferred to the Boardman school, her whole term of service being thirty-five years.

Of the teachers who died, Miss Mary G. Carpenter had taught in the Agassiz school for eighteen years, and Miss Jane Whoriskey, in the Gore school for ten years. Both of these teachers were devoted to their work.

Another teacher whose resignation will take effect the first of March has ceased active work in the schools. For forty-four years Miss Ada H. Wellington has taught in the Harvard school, filling the position known for these many years as that of master's assistant. For twenty-two years she was associated with Mr. Aaron B. Magoun, the first master of that school, and for a little more than twenty years with Mr. James H. Barrell who succeeded Mr. Magoun, and for nearly two years with Mr. Thomas W. Davis, the present master. During all these years Miss Wellington's strong personality has been felt in the work of the school; and her influence has followed her pupils into their later life.

Perhaps in no way can this influence be more clearly seen than in her successful efforts to replace the marble bust of Mr. Magoun, destroyed when the Harvard schoolhouse was burned. A few selections from the circular letter sent to the contributors to the second bust will show that

the former pupils of the Harvard school needed only a word from Miss Wellington to awaken anew their interest in the school and their loving remembrance of Mr. Magoun. These selections are also given that the school reports may contain the facts relating to the gift of the two busts of Mr. Magoun.

The following is an account of the loss of the first bust, and of its replacement by the second : —

"On the morning of March 21, 1899, the third story of the Harvard schoolhouse was totally destroyed by fire. The loss most deeply to be regretted was the bust of Mr. Magoun, as there seemed no possibility of replacing it. After a while, however, it became known that the plaster model from which it was made was in a perfect state of preservation in the home of Mr. George B. Magoun, in Babylon, L. I. This led to the hope that a duplicate might be made if funds could be procured. The plans which were so successful more than thirty years before were adopted. Appeals were made through the local papers, and personal letters were sent to more than two hundred of his pupils. In the responses to these appeals great encouragement was given to proceed with the work. The plaster cast was brought to Boston and placed in the hands of an expert marble worker for reproduction. The work was a perfect success, and September 9, 1902, the new bust was placed in its position of honor in the hall of the Harvard school. It stands in a niche in the wall, beneath which is a bronze tablet bearing the following inscription : —

In Loving Memory of
AARON BUZZELL MAGOUN
First Master of the Harvard School
Appointed 1838 Resigned 1881
Given by Mr. Magoun's Former Pupils"

The account of the unveiling of the first bust is as follows :— "On September 9, 1875, a very enjoyable reunion was held, and the unveiling of the bust was enthusiastically received. It was placed upon a walnut pedestal on which was a white marble tablet bearing in gold letters this inscription :—

From the Scholars of 1838–1871"

The following is but a just tribute to Miss Wellington :—

"This paper is not complete without an allusion to the person whose services contributed in so large a degree to the production of both busts, the original and its successor. Without her strong personal interest in the work, the first bust might have taken form, but the second would have hardly been fashioned. All credit is due to Miss Ada H. Welling-

ton, for twenty-two years associated with Mr. Magoun in the Harvard school, and whose connection with the school has continued until her term of service is even longer than was his. What she has accomplished in helping to perpetuate the memory of the first master of that school crowns her work of forty-four years of faithful service."

QUALIFICATION OF TEACHERS.

A person to be eligible to the position of teacher in a kindergarten must have had a course in a high school, a course in a kindergarten normal school, a year's experience in teaching either in a kindergarten or a primary school, and must be able to play the piano; to be eligible to a position in a primary or grammar school, he must have had a course in a high school, a course in a normal school, and a year's experience in teaching; to be eligible to a position in a high school, except in the manual training department of the manual training school, he must be a college graduate. Equivalent preparation may be accepted.

When a teacher has been nominated for a position in a kindergarten or primary school, or for a position below that of principal or master in a grammar school or high school, two persons of experience among the teachers who are not connected with the school in which the nominee is to serve, are deputed by the superintendent to visit the teacher nominated and to examine him at work. Each person so deputed reports in writing to the superintendent; and these reports are kept on file by him, and are open to inspection by members of the Board only. For a nomination to a position in a high school, the superintendent, with the consent of the committee on high schools, may dispense with such examination, or may depute as examiners teachers connected with the school in which the nominee is to serve or persons not in the service of the city.

The committee on teachers considers all nominations made by the superintendent. They confer with the superintendent, consider the reports of the examiners deputed by him, make further inquiry at discretion, and report to the Board for final action.

Any nomination referred to the committee on teachers elapses at the expiration of four months, not counting the summer vacation. A person who has failed of confirmation is not to be nominated to a similar position within two years, except on the approval of this committee.

This committee inquires and reports to the Board in executive session, as to the success of any teacher in the employment of the city, when so requested by any member of the Board or by the superintendent; and no teacher whose success is under inquiry receives the regular increase of salary, except on the recommendation of this committee.

Preparation for the work of teaching as shown by years of study, and experience as shown by years of teaching, are considered in fixing the salaries of teachers at the time of their nominations.

Under the direction of the superintendent, teachers may visit other schools to observe the discipline and instruction. They may be required to attend teachers' meetings or courses of instruction in methods of teaching for one hour a week. Such meetings may be held on Saturday mornings during term time or at such other time, not in school hours, as the superintendent may direct. Meetings in addition to those indicated above may be held by the superintendent or may be called by him, on request of directors in special subjects.

SALARIES OF TEACHERS AND SCHOOL OFFICERS.

Latin School and English High School.

Head Masters	$3,000 00
Masters	2,000 00
Masters' Assistants	1,200 00
Teachers, first year	700 00
with an annual increase of $50 until $950, the maximum, is reached.	
Assistant teachers, first year	500 00
" " second year and each succeeding year	600 00

Rindge Manual Training School.

Head Master	$3,000 00
Master's Assistant	1,300 00
Teachers' salaries range from $700 to $1,500	

Wellington Training School.

Master	$2,500 00
Supervising Teachers (three) first year	900 00
" " second year and each succeeding year	1,000 00
Master's Assistant, first year	800 00
" " second year and each succeeding year	900 00
Teachers of the eighth grade	700 00
Teachers of the seventh grade (one year's experience)	450 00
Teachers of the other grades	250 00

Grammar and Primary Schools and Kindergartens.

Masters of grammar schools	$2,000 00
Sub-masters, first year	1,000 00
with an annual increase of $100 until $1,400, the maximum, is reached.	
Masters' Assistants, first year	800 00
" " second year and each succeeding year	900 00
Teachers of the ninth grade, first year	750 00
" " " " second year and each succeeding year	800 00
Special Teachers in grammar schools, first year	700 00
" " " " " second year and each succeeding year	750 00
Principals of primary schools, first year	700 00
" " " " second year and each succeeding year	750 00
with five dollars additional for each room under her supervision.	
Teachers of grammar and primary schools, and principals of kindergartens, first year	$450 00
with an annual increase of $50 until $700 is reached.	

SUBSTITUTES.

The pay of a substitute teacher in a high school, who is employed temporarily, is $2.50 a day; if employed one month or more, it is at the rate of $500, $600 or $700 a year, the sum to be determined by the superintendent, who shall consider the experience of the teacher and the position to be filled, in fixing the sum.

The pay of a teacher who is employed temporarily as a substitute in a grammar school, a primary school, or a kindergarten, is $1.00 a session; if employed one month or more, it is at the rate of $450 a year.

Evening Schools.

Principal of Mechanical Drawing School, per evening	$4 00
Principal of High School " "	4 00
Principal of Elementary Schools " "	3 00
Teachers in Drawing Schools " "	3 00
Teachers in High School " "	2 00
Teachers in Elementary Schools " "	1 50

Special Teachers and officers.

Director of Music	$2,000 00
Assistant Teacher in Music	800 00
Director of Drawing	1,900 00
Assistant Teacher in Drawing	800 00
Director of Nature Study (three-fifths time)	1,000 00
Director of Physical Training	900 00
Instructor in Physical Training in the High Schools	700 00
Director of Sewing	700 00
Teachers of Sewing	600 00
Superintendent of Schools	3,500 00
Supervisor of Primary Schools	1,200 00
Agent of the Board	2,100 00
Truant Officers (four are employed)	1,000 00
Secretary of the School Committee	400 00
Page of the School Committee	25 00
Secretary and Librarian of the Latin School	600 00
Secretary and Librarian of the English High School	600 00
Secretary and Librarian of the Rindge Manual Training School	600 00

The following rules apply to special cases: —

Upon the recommendation of the superintendent and the committee on teachers, the salary of a teacher in a grammar or primary school, or of the principal of a kindergarten, may be increased from $700 to $750, provided such teacher has served at least one year. The number of teachers whose salaries may thus be increased is not to exceed one-third of the whole number of teachers in these grades.

Assistant teachers, that is, teachers not in charge of a room, are paid $450 the first year, $500 the second, and $550 the third and each succeeding year; and, in the case of assistants in the kindergartens, $600 for the fourth and each succeeding year.

MEMORY SELECTIONS.

One of the requirements in the course of study for the grammar schools is that selections of poetry and prose shall be committed to memory and recited, not in concert only, but by each pupil, and that they be written frequently from memory. For the primary schools the directions are as follows: — "Teach as a part of the regular exercises a few pieces of standard poetry, also quotations and maxims, and copy what is taught each term into a blank book."

The committing to memory of choice selections of poetry and prose has been the practice in the schools of Cambridge for many years. The selections have been left to the teachers, the idea being that the best results would be secured when the teacher was free to select such pieces as were of special interest to her.

In former years the superintendent took special pleasure in listening to the recital of these pieces in the several schools, but in these recent years he has not found time to hear them. He decided, therefore, to ask that a copy of all the pieces learned during the school year be sent to his office. This was done, and during the summer vacation he spent days in reading these papers and noting the selections made by the different teachers. In fact he became deeply interested in the work, and the papers which were intended to give information as to what had been committed to memory also revealed to him in a measure the literary taste and judgment of the teacher. A great variety of pieces was selected and in most cases they were selections of real merit.

It was found, however, that frequently the same selection was made by teachers of different grades, the result being a loss to the pupils who had previously learned the piece. To avoid this in future the teachers of the several grades were requested to make a list of pieces which should be used only in the grade for which they were selected. The teachers of the lower grades were not to include in their lists any selection made for a higher grade. This required that the selections for the ninth grade should be made first. Grade meetings were called one after another, until a list was prepared for each grade No teacher is restricted to the pieces selected for her grade. She can select from these selections the whole or a part of any piece, or choose other pieces with this limitation, that no piece selected for one grade shall be taught in another.

The course of study requires that at least two hundred lines be taught in each of the four upper grades, one hundred fifty in the fifth grade, and one hundred in the fourth grade.

A list of the selections for the several grades will be found in the separate report of the school committee.

FRANCIS COGSWELL,
Superintendent of Schools.

In School Committee, February 19, 1903.

Ordered, That the report of the superintendent as read and outlined by him be accepted and adopted as the annual report of the school committee for 1902, and that the secretary be authorized to append the names of the members of the committee thereto.

SANFORD B. HUBBARD,
Secretary

Members of the School Committee for 1902

JOHN H. H. McNAMEE, *Chairman ex-officio.*

WILLIAM TAGGARD PIPER.	PHILIP M. FITZSIMONS.
CHARLES H. THURSTON.	ROBERT WALKER.
PAUL H. HANUS.	CHARLES F. WYMAN.
‡CAROLINE L. EDGERLY.	MARY E. MITCHELL.
GEORGE W. BICKNELL.	SHERMAN R. LANCASTER.
J. HENRY RUSSELL.	CAROLYN P. CHASE.
EDWARD B. MALLEY.	ARTHUR P. STONE.

WILLIAM J. MANDELL.

‡Resigned, Oct. 16, 1902.

REPORT OF THE CITY ENGINEER

OFFICE OF THE CITY ENGINEER,
CAMBRIDGE, December 1, 1902.

To the Honorable, the City Council: —

The undersigned herewith submits the thirty-sixth annual report of the City Engineer, showing the operation and expenditures of the departments of Engineering and Sewers for the year ending December 1, 1902.

OFFICE.

Nine assistants have been employed in the department during the year at various times, beside the clerk, and three assistants employed on work connected with the Park Department.

The yearly summary of work done is as follows: —

FOR STREET DEPARTMENT.

Number of surveys	10
Number of street lines given	160
Number of street grades given	150
Number of streets on which paving, curb, etc., was measured	46
Number of assessments prepared	361
Number of plans or profiles prepared	45

FOR SEWER DEPARTMENT.

Number of surveys	5
Number of lines given	200
Number of grades given	200
Number of sewers measured	12
Number of sewers assessed	8
Number of sewer assessments prepared	40
Number of plans or profiles prepared	51

FOR WATER WORKS.

Number of surveys	2
Number of lines given	4
Number of grades given	13
Number of plans or profiles made	3

FOR PARK DEPARTMENT.

Number of surveys made	52
Number of grades given	145
Number of plans or profiles made	4
Number of lines given	35

FOR PRIVATE PARTIES.

Number of street lines given	65
Number of street grades given	10

MISCELLANEOUS WORK.

Number of surveys	77
Number of lines or levels given	40
Number of houses measured	300
Number of plans or profiles prepared	439

There are now on file in the office 8,170 plans.

FINANCIAL.

Appropriation	$10,800 00	
Expended	10,027 98	
Balance unexpended		$772 02
Assessors' plans	$300 00	
Expended	229 35	
Balance unexpended		70 65

BOARD OF SURVEY.

Of the various matters brought before the Board of Survey during the year, perhaps the most important was the petition presented with accompanying plan for the widening and extension of DeWolf Street to connect the parkway by a suitable and attractive avenue with Massachusetts avenue at Quincy Square.

Several plans of this scheme were made with different widths and lines and an estimate of the cost prepared. Several public hearings were held, and while many were strongly in favor of its adoption, considerable opposition developed to any of the plans proposed. This would undoubtedly prove a very desirable and attractive connection between the parkway and the highways to the North and West.

None of the plans have yet been approved by the Board.

Eight meetings of the Board were attended at which the various matters presented were discussed.

STREET CONDUIT LOCATION PLANS.

Work upon these plans has been prosecuted as opportunity offered, until now 64 of the 200 plans necessary to cover the whole city are in a more or less complete state. The usefulness of these plans has been demonstrated the past year in the frequent reference to them for the purpose of locating various underground structures in the streets. An im-

portant amendment to the City Ordinances relating to this matter of underground structures was passed in July of this year. It is as follows: —

"Section 10 of Chapter 25 of the Revised Ordinances of 1892 as amended to November 8, 1899, is hereby amended by adding thereto the following: — 'No gas pipe, water pipe, sewer, conduit, street railway track, pole nor any other structure, except wires, shall be placed beneath, upon or above any public street or way, except upon a location and at a grade approved by the City Engineer, or authorized by the Board of Aldermen.

Within sixty days after the completion of the work so approved or authorized, a final plan showing accurately in detail the lines, grades and construction of the work as finished, shall be filed in the office of the City Engineer. If required by the City Engineer a preliminary plan showing the proposed location and grade of the structure shall first be filed in his office.'

Any person violating the foregoing provision shall be subject to a penalty of twenty dollars for each offence and shall remove any structure placed contrary to the provisions of this section if required so to do by the City Engineer, and upon failure so to do the City Engineer may make such removal or change, and the cost thereof shall be paid to the City by the person or department owning or controlling the structure."

Good cannot fail to result from the carrying out of the provisions of this ordinance.

STREETS.

The following streets have been laid out and accepted during the year: —

STREETS LAID OUT AND ACCEPTED DECEMBER 1, 1901, TO DECEMBER 1, 1902

LOCATION OF STREET.						PLAN.	
Name.	From	To	Length in Feet.	Width in Feet.	Date of Acceptance.	Made by	Date.
Athenæum street	First street	Second street	399	50	Jan. 3, 1902	W. A. Mason & Son	Dec. 14, 1901
Blanche street	Massachusetts avenue.	Auburn street	680	30	July 3, 1902	W. A. Mason & Son	June 18, 1901
Brookline street	Old Rangeway	Charles street	785	100	Mar. 15, 1902	City Engineer	Dec. 16, 1901
*Commercial avenue	Bridge street	Northerly line of dock.	†269	60	Jan. 3, 1902	City Engineer	Mar. 5, 1894
Commercial ave. corner of	Bridge street widened to	radius of ten feet			Jan. 3, 1902	City Engineer	Mar. 5, 1894
Cottage Park avenue	Massachusetts avenue.	Southerly	350	40	Jan. 6, 1902	C. H. Gannett	Mar. 23, 1901
Jackson street	Rindge avenue	Harvey street	1,367	40	Jan. 3, 1902	City Engineer	Nov. 22, 1900
Line street	Kirkland street	Cambridge street	1,835	33	Nov. 26, 1902	City Engineer	Nov. 12, 1894
Munroe street	First street	Third street	1,093	50	Jan. 3, 1902	W. A. Mason & Son	Nov. 26, 1901
Museum street	Westerly line Carver st.	Somerville line	185	40	Oct. 15, 1902	W. A. Mason & Son	June 28, 1901
Pacific street	Brookline street	Sidney street	470	40	Jan. 3, 1902	City Engineer	Nov. 22, 1900
Putnam avenue corner of	River street widened to	radius of thirty-two feet			July 3, 1902	City Engineer	July 10, 1872
Second street	Binney street	Athenæum street	500	50	Jan. 3, 1902	W. A. Mason & Son	Dec. 18, 1901
Warland street	Pleasant street	River street	247	40	Nov. 1, 1902	City Engineer	Oct. 8, 1901
Wright street	Martin street	Hudson street	280	30	Dec. 28, 1901	W. A. Mason & Son	Nov. 5, 1901

* Widening.

† Not included in length of new streets.

Total length of accepted streets December 1, 1901, 93.848 miles.
Total length of streets accepted from December 1, 1901, to December 1, 1902, 8,191 feet or 1.551 miles.
Total length of accepted streets December 1, 1902, 95.399 miles.

BRIDGES.

An examination of the various wooden bridges shows that many of them will need a considerable amount of repairs in the way of new timbers, planking, painting, etc., during the coming year to keep them in safe condition.

As recommended in the last annual report, the Walden Street Bridge was thoroughly overhauled, the stringers and deck of the roadway were renewed with new timber and the lower portions of the metal work were scraped, cleaned and painted. The portions over the tracks were further protected with oak sheathing firmly secured to the members of the bridge, and where possible the metal was covered with a paste compound, composed of linseed oil, red lead and Portland cement. At this time this protection seems to be in excellent condition.

The total cost of this work, lumber, paint, labor, etc., was $1,360.86.

It is found, however, that some of the metal parts of the brackets which support the sidewalk are being rapidly corroded and weakened, so that now they are in a dangerous condition. These are so situated as to render protection impracticable. It is recommended that these brackets be reinforced or replaced with new ones at once.

The two metal bridges in Huron Avenue, one over the Watertown branch of the Fitchburg Railroad and one over the Water Works pipeway, will need some repairs. The sidewalk railings should be scraped and painted and the roadway and sidewalk plank renewed. Some of the timber stringers may also require renewal.

SEWERS.

0.277 miles of sewers have been built by the City during the year, making the total mileage in the City 111.807 miles. These figures do not include the length of sewers constructed as a part of the Improved Sewerage System in streets which already contained sewers. Where sewers have been constructed in streets not already sewered such length has been included in the length given above.

The cost of the construction of sewers to date has been $1,373,623.37. To this may be added the amount expended for Improved Sewerage Construction to date $255,151.76, making the total amount expended to date for new sewer construction and Improved Sewerage $1,628,775.13.

All the sewers have been built by day labor by the Superintendent of Sewers, under the general direction of the City Engineer.

Forty-one catch basins have been built at a cost of $2,299.13. Of this number five were charged to Improved Sewerage account, cost $298.09.

Thirty-six catch basins have been repaired. Sixty-three hundred and nine loads of material were removed from 2,482 catch basins at a cost of $5,466.72 for this year.

METROPOLITAN SEWER.

The State tax for the year 1902, assessed to Cambridge on account of the Metropolitan Sewer, is as follows: —

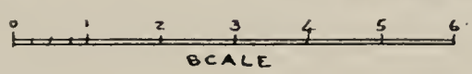
Sinking Fund requirements	$11,944 34
Interest account	43,601 19
Maintenance and operation	22,706 64
Total tax	$78,252 17

CROSS SECTION OF
SEWER IN HAMPSHIRE ST.

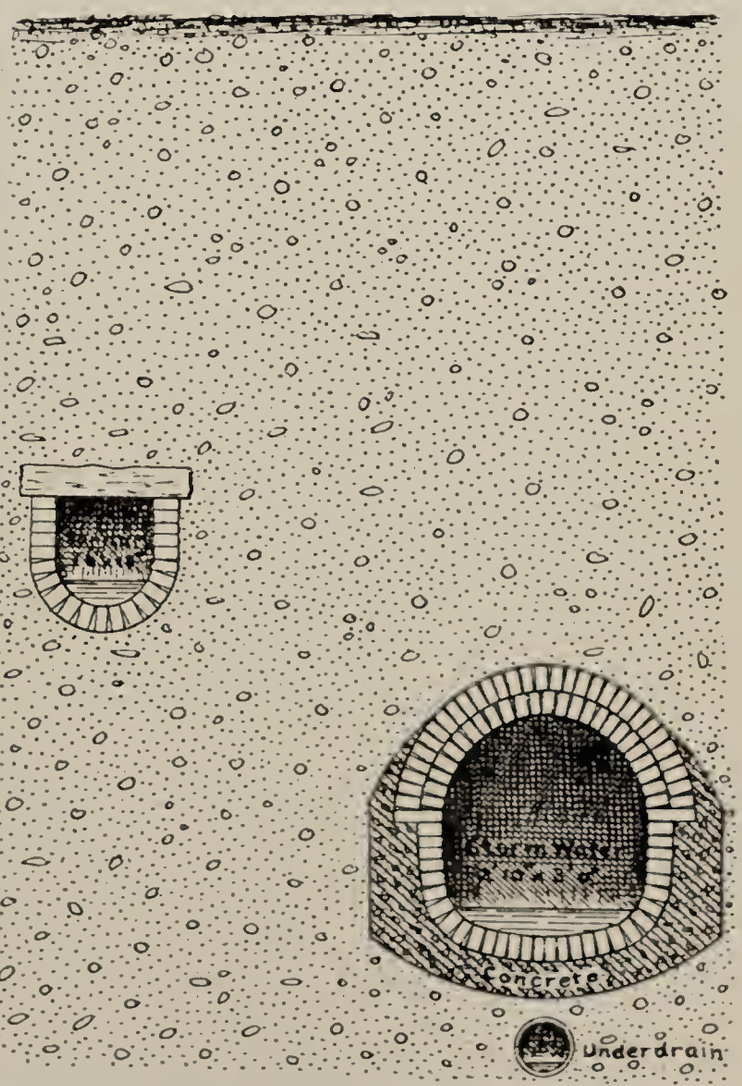
CROSS SECTION OF
SEWER IN CAMBRIDGE ST

CROSS SECTION OF
SEWER IN BALDWIN ST.

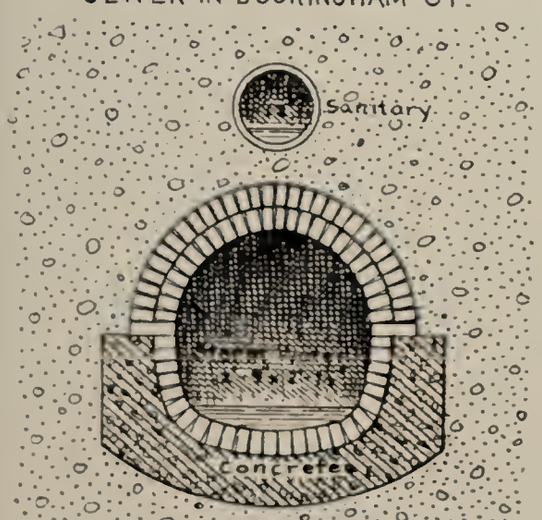
CROSS SECTION OF
SEWER IN PARKER STREET



CROSS SECTION OF
SEWER IN CRAIGIE STREET



CROSS SECTION OF
SEWER IN BUCKINGHAM ST.



SEWERS CONSTRUCTED BETWEEN DECEMBER 1, 1901, AND DECEMBER 1, 1902.

Location.			Construction.							Total Cost.
Street.	From	To	Material.	Size in inches.	Av. depth of cut.	Man-holes.	Lamp-holes.	Inlets.	Length in feet.	
Chestnut	Waverly street	N'w'ly to end of old sewer	Akron pipe	10	6.3	..	1	18	271 4	$194 83
Everett	Irving street	Francis avenue	" "	12	10.4	2	..	17	300.7	*a* 2,236 78
Francis ave	Everett street	Southerly	" "	8	9.1	1	..	13	228.4	[See Everett st.
Irving	Everett street	S'ly to end of old sewer	Brick and concrete	20 x 22	8.2	..	..	..	31.3	See Everett st.
Royal ave	Huron avenue	Concord avenue	Akron pipe	12 and 8	8.6	1	1	36	469.1	402 81
Sidney	Erie street	Southwesterly	" "	10	10.0	..	1	11	135.0	*b* 511 82
Winthrop	End of old sewer	W'ly to near Boylston st.	" "	10	7.6	..	..	2	25.2	29 27
						4	3	97	1,461.1	$3,375 51
c Hancock	Massachusetts av.	Harvard street	Akron pipe	10	11.0	3	..	55	815.5	$1,442 54
c Upland road	Richdale ave	Westerly	" "	8	6.8	..	1	3	149.9	109 43
d Washburn ave	Washburn pl	Southwesterly	" "	10	3.4	..	..	6	128.8	74 00
						3	1	64	1,094.2	$1,625 97

a Includes cost of storm water sewer in Everett street and Francis avenue. For details of construction see Storm Sewer Table.

b Includes cost of storm water sewer.

c For sanitary sewage only.

d For storm water only.

IMPROVED SEWERAGE CONSTRUCTION.

Storm Sewers Constructed Between December 1, 1901, and December 1, 1902.

Location.			Construction.							Total cost.
Street.	From	To	Material.	Size in inches.	Av. depth of cut.	Man-holes.	Lamp-holes.	Inlets.	Length in feet.	
Buckingham place..	Buckingham street	Easterly	Brick and concrete....	18x20	8.8	1	.....	17	241.0	See Sanitary Sewer Table.
Buckingham	Craigie street.....	Parker street.....	Brick and concrete....	31½x33	13.1	2	.....	29	439.8	See Sanitary Sewer Table.
Craigie.....	Sparks street.....	Buckingham street.....	Brick and concrete....	34x36	12.5	1	.....	13	313.4	See Sanitary Sewer Table.
Everett.....	Irving street.	Francis avenue.....	Brick and concrete....	20x22	8.1	2	.....	18	300.7	See Table Sewers Constructed.
Francis avenue.....	Everett street.....	Southerly.....	Akron pipe.....	15	7.7	1	.... .	15	228.4	See Table Sewers Constructed.
Parker	Buckingham street	Healey street.....	Brick and concrete....	28⅜x30	10.0	1	.....	30	458.7	See Sanitary Sewer Table.
Sparks.....	Sibley court.....	Craigie street.....	Brick and concrete....	48x51	10.1	2	.....	55	789.5	See Sanitary Sewer Table.
Sidney.....	Erie street.....	Southwesterly.	Brick and concrete.. .	18x20	6.7	.....	.....	11	133.7	See Table Sewers Constructed.
Washburn avenue..	Washburn place...	Southwesterly.....	Akron pipe.....	10	3.4	.....	.....	6	128.8	See Table Sewers Constructed.
						10	.....	194	3,034.0	

IMPROVED SEWERAGE CONSTRUCTION.

Sanitary Sewers Constructed Between December 1, 1901, and December 1, 1902.

Location.			Construction.						Total Cost.
Street.	From	To	Material.	Size in inches.	Av depth of Cut.	Manholes.	Lampholes.	Inlets.	Length in feet.	
Baldwin	Cambridge street..	Kirkland street	Brick and concrete	27 x 36 1-8	13.7	4	...	82	1,134.3	See Hampshire st.
Buckingham place..	Buckingham st	Easterly	Akron pipe	10	6.6	1	....	14	241.0	See Sparks street.
Buckingham	Craigie street	Parker street	Portland pipe	12	9.1	2	....	26	439.8	See Sparks street.
Cambridge	Hampshire street..	Baldwin street	Brick and concrete	32 x 43 & 29½ x 39½	21.9	12	....	161	2,140.5	See Hampshire st.
Everett	Irving street	Francis avenue	Akron pipe	12	10.4	2	....	17	300.7	See Table of Sewers Constructed.
Fayette	Cambridge street..	Broadway	" "	8	10.6	3	....	93	1,266.9	See Hampshire st.
Francis avenue	Everett street	Southerly	" "	8	9.1	1	...	13	228.4	See Table of Sewers Constructed.
Hampshire	Portland street	Cambridge street	Brick and concrete	38 x 51 & 35 x 47	16.6	15	....	233	3,651.3	*a* $76,817 11
Kirkland	Baldwin street	Myrtle avenue	Akron pipe	10	11.4	1	....	10	92.6	See Hampshire st.
Magnolia avenue	Baldwin street	Line street	" "	10 and 8	10.6	2	....	49	700.7	See Hampshire st.
Myrtle avenue	Kirkland street	Magnolia avenue	" "	8	10.1	2	....	38	526.6	See Hampshire st.
Parker	Buckingham st	Healey street	" "	10	6.7	1	....	30	458.7	See Sparks st.
Sparks	Sibley court	Craigie street	" "	15	9.8	3	....	25	830.5	*b* $21,495 73
						49	...	791	12,012.0	

a Sewers in Hampshire, Amory and Antrim streets, built in 1901, cost includes sanitary sewers in Hampshire, Amory, Antrim, Cambridge, Fayette, Baldwin, and Kirkland streets, Magnolia avenue and Myrtle avenue.

b Cost includes storm and sanitary sewers in Buckingham place, Sparks, Buckingham and Parker streets, and storm sewer in Craigie street.

IMPROVED SEWERAGE.

Hampshire and Cambridge Street District.

Work upon this district which was suspended during the winter was resumed March 24, 1902, and at this date is substantially completed.

The Carson excavating machine purchased last year proved a great service in making the heavy cut on Cambridge Street, in one place the excavation being 28 feet deep. Clay was encountered the entire length of Cambridge Street and Hampshire Street from small depths below the surface to the bottom of the trench. In making the refill six or eight feet in depth of the clay was removed and its place made up with sand or gravel.

A twelve-inch water pipe on Cambridge Street, supposed to be laid in the early days of the Water Works, was found to be so crooked as to line, that it had to be taken out and a new pipe put in, near the northerly curb, by the Water Department.

This sewer forms the trunk line of what will probably be the largest separate sewer district of the City, and will probably require to be extended northerly at no distant day to reach the low territory between Kirkland and Wendell Streets.

The total length of sewers built in Hampshire, Cambridge, Baldwin, Antrim, Amory and Fayette Streets and Myrtle and Magnolia Avenues, is 12,052.6 feet, the total cost to date is $76,817.11. A small amount of work still remains to be done, filling, surfacing streets, etc.

Sparks, Craigie and Buckingham Street District.

In response to a petition received last year for improved sewerage, the construction of this system was ordered, and has now been completed. Owing to the varying conditions found here, a somewhat complicated system was adopted.

In Sparks Street the old sewer was taken out and a storm sewer 4 feet x 4 feet, 3 inches, and a separate sewer of 15 inch pipe put in one trench.

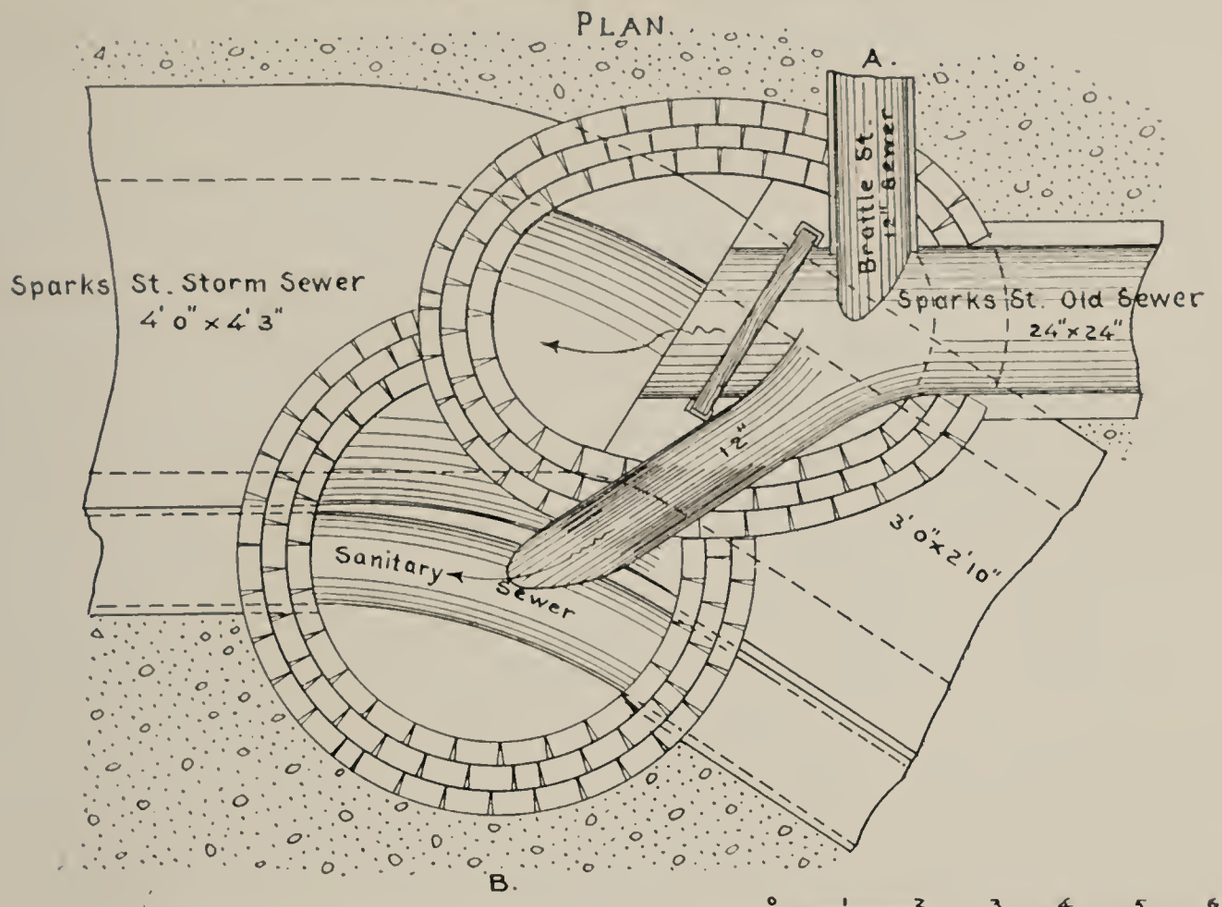
In Craigie Street the old sewer was used for a separate sewer and a new storm sewer 34 inches x 36 inches built.

In Buckingham Street, Buckingham Place and in Parker Street the old sewer was removed and new storm and sanitary sewers built, aggregating in the whole district 2,242.4 feet. The total cost of the system (including the sewer in Buckingham Place not included in original estimate) is $21,495.73.

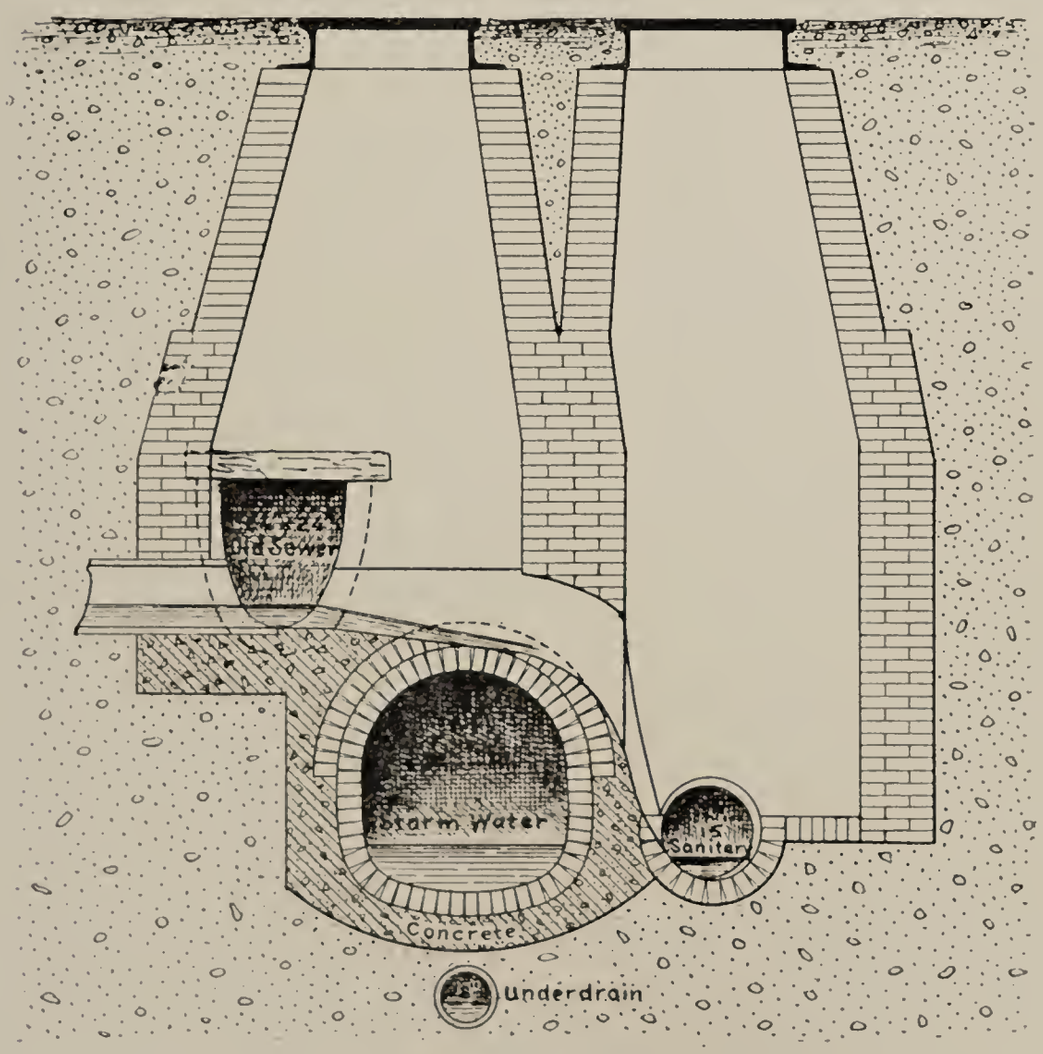
As will be seen by the accompanying cuts giving sections of sewers in various streets as they have been constructed, a large use has been

SPARKS ST. SEWER AT JUNCTION IN BRATTLE ST.

PLAN.

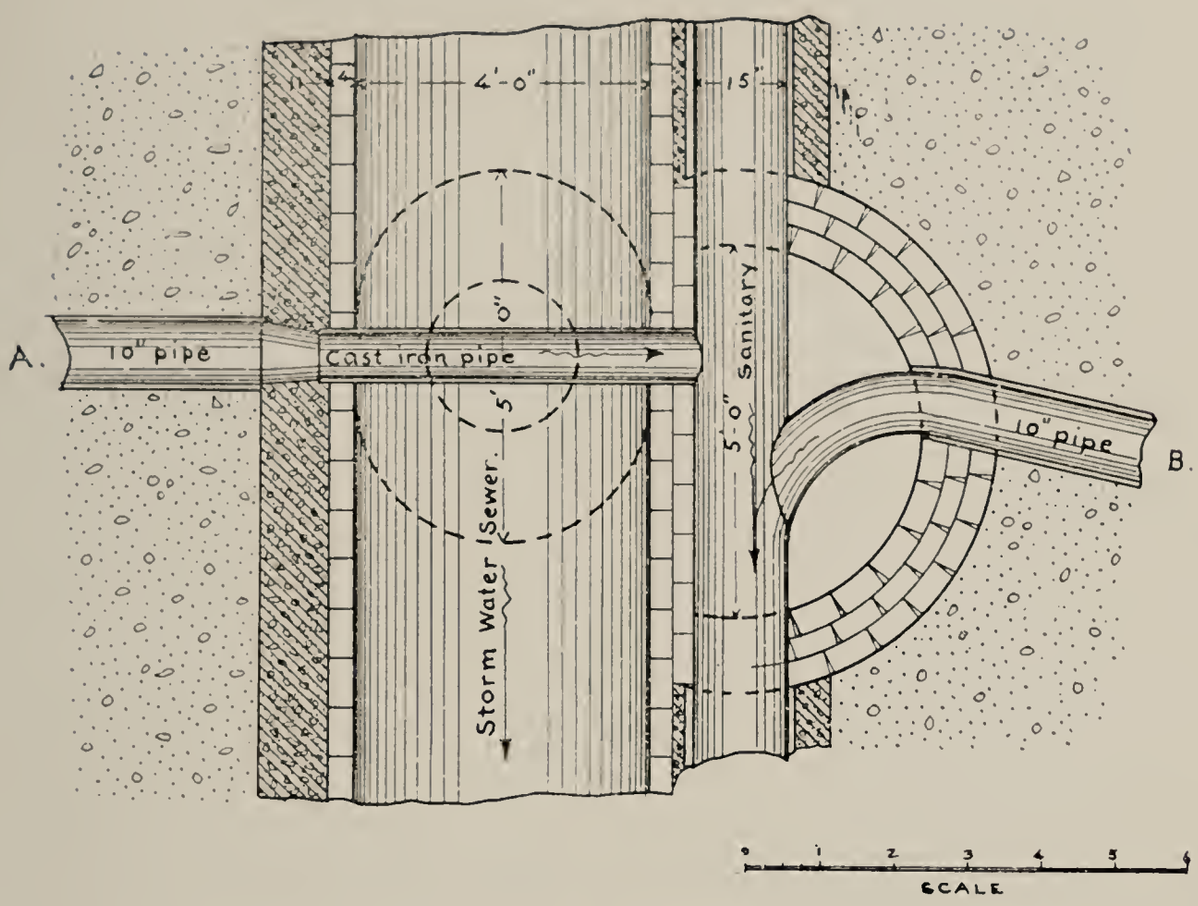


CROSS SECTION. A.B.

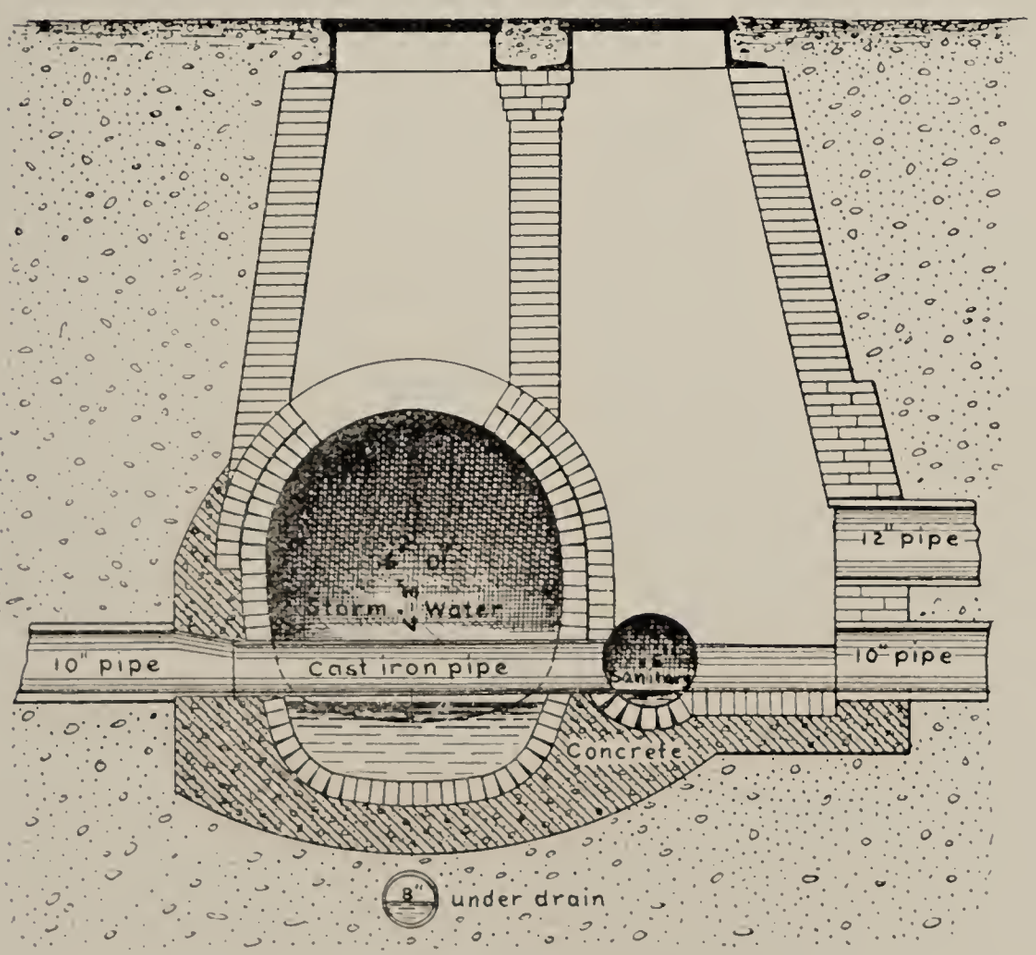


SPARKS ST. SEWER AT FOSTER ST.

PLAN



CROSS SECTION. A.B.



made of Portland cement concrete. It is believed that an increase in both economy and strength has been secured by the use of this material.

It is certain that the inner surface of sewers formed of concrete are superior as regards smoothness to that obtained with brick.

Hancock Street.

Complaints were received from owners of real estate on this street, between Massachusetts Avenue and Harvard Street, that cellars were flooded at frequent intervals, and so a new separate sewer was constructed on this portion of the street, arranged so as to connect now with the present sewer and finally to connect with the proposed separate system in Franklin Street when it may be constructed.

Everett Street and Francis Avenue.

On petition of owners on these streets new sewers were built in these streets so constructed that they at present discharge through the old sewer in Irving Street, but may be connected with the separate sewer system when it shall be built from its present terminus at Kirkland Street and Baldwin Street. Both storm and separate sewers were laid in one trench on each street.

The following statement shows the total expenditures for improved sewerage for the years since the work was begun.

Improved Sewerage Expenditures.

Expended during the year 1899	$42,989 24	
" " " " 1900	73,619 11	
" " " " 1901	76,546 14	
" " " " 1902	61,997 27	
Total expenditures to date		$255,151 76

Since the report in 1898 upon the matter of improved sewerage, a number of sewers have been built, the cost of which were not included in the estimates contained in the report but which have been charged to that appropriation. These are as follows: —

SEWERS NOT INCLUDED IN 1898 REPORT.

Harvard and Prospect Streets	*$4,939 16	
Greenhalge and Vassar Streets	16,809 75	
Amherst Street and Amherst Alley	3,143 60	
Erie and Brookline Streets	17,114 56	
		$42,007 07

*This amount does not include the sum of $592.99 charged to Sewers Maintenance account.

SEWERS INCLUDED IN 1898 REPORT.

Robinson and Pacific Street District	$70,673 96	
Massachusetts Avenue and Sherman Street District	44,157 89	
Hampshire and Cambridge Street District	76,817 11	
Sparks and Buckingham Street District	21,495 73	
		$213,144 69

Total amount expended from Improved Sewerage account $255,151.76.

A numerously signed petition was received asking for relief from defective sewerage in the region about Banks Street and Grant Street. No action has yet been taken on this petition.

Belmont Sewerage.

In the year 1880 when a portion of Belmont was annexed to Cambridge, the right was given to the town to connect any of its public sewers with any sewer constructed by Cambridge in the territory annexed, upon the payment of a "just compensation therefor."

On September 2, 1902, the Selectmen of Belmont presented a petition requesting permission to connect its system now being constructed in the easterly part of the town, comprising about 330 acres, with the Cambridge system in Cushing Avenue near the Belmont line.

After a conference with the Selectmen and learning that their intention was to petition the Legislature at the coming session, for some action looking toward the extension by the State, through its Metropolitan Water and Sewerage Board, of the Metropolitan sewer in this vicinity to the Belmont line, the selectmen presented a new petition asking for a temporary permit to connect with the Cambridge sewer system.

This permit was granted for one year and the matter of compensation was left for future adjustment.

FINANCIAL.

CONSTRUCTION GENERAL.

Appropriation		$15,000 00	
Expended		7,509 72	
Balance unexpended			$7,490 28
Received from assessments	$5,713 49		

MAINTENANCE.

Appropriation	$17,500 00	
Expended	17,495 00	
Balance unexpended		5 00

IMPROVED SEWERAGE.

Appropriation	$68,845 51	
Expended	61,997 27	
Balance unexpended		$6,848 24

BRIDGE STREET SEWER OUTLET.

Before the connections with the Metropolitan sewer were made, dredging of flats about the outlet of this sewer was necessary annually, to prevent dangerous accumulations of material with accompanying presence of noxious odors, gases, etc. The last dredging done here was in 1897. Since that time the material has gradually accumulated and it was necessary to again dredge the flats. A contract was made with the Eastern Dredging Company and 4,949.6 cubic yards were removed and deposited in the Boston outer harbor. The total cost of the work was $2,854.09. Of this amount, five-ninths, or $1,585.60, is to be paid by the City of Somerville. This work was done so late in the year that bills were not included in the expenditures for the year.

ALEWIFE BROOK DRAINAGE.

In April of this year a communication was received by the City Engineer from the Board of Health, requesting an examination and report upon the matter of improving the drainage of lands adjacent to Alewife Brook. A report was made suggesting certain plans of improvement and recommending that the co-operation of the City of Somerville and the towns of Belmont and Arlington be invited to take such steps as might be necessary to secure a permanent improvement in the drainage of this locality lying partly in the several municipalities.

In response to the invitation of the Board of Health, meetings of conference were held with the authorities of the city and towns interested and it was finally decided that the City Engineers of Cambridge and Somerville and the Town Engineers of Arlington and Belmont be a sub-committee to examine and report some plan for the improvement desired.

On July 12, 1902, the sub-committee made a report recommending that the brook be cleaned out practically its entire length and that a set of self-acting tide gates be built at a point near the junction of Alewife Brook with Mystic River.

The construction of a large receiving basin or reservoir at this point was also considered, but not recommended to be built at present. The estimated cost of the work recommended was $9,500.00. After discussion by the full committee, it was decided to present a bill to the

Legislature to secure the necessary power to carry out this work, and the several solicitors were instructed to prepare such a bill and present it at the coming session of the Legislature.

Automatic registers for recording the movement of some of the sewer regulators and tide gates have been continued in operation during the year.

The following is a corrected table of the operation of these fixtures so far obtained: —

STATEMENT SHOWING RESULTS OBTAINED FROM RECORD OF AUTOMATIC REGISTERS AT VARIOUS CONNECTIONS WITH THE METROPOLITAN SEWER.

	REGULATOR.				TIDE GATE.					
	Binney St. at Portland St.		Mass. Ave. at Alewife Brook.		Binney St at Outlet.		Bath St. at Outlet.		Lowell St. Outlet.	
Year.	Hours shut.	Per cent. of total time.	Hours shut.	Per cent. of total time.	Hours open.	Per cent. of total time.	Hours open.	Per cent. of total time.	Hours open.	Per cent. of total time.
	h. m.		h. m.		h. m.		h. m.		h. m.	
To December 1, 1899	606 45	6.93	.....	.....	248 00	2.83	569 00	6.50	.....	.....
1900	569 30	6.50	387 8	4.42	291 10	3.32	315 25	3.60	.....	.....
1901	418 40	5.03	587 30	6.74	217 20	2.48	209 00	2.39	.....	.....
1902	609 40	6.90	*573 00	6.50	§123 20	1.55	.....	.....	.....	.....
Dec. 1, 1901, to Jan. 14, 1902	.....	.....	.....	.....	.....	.....	29 35	2.77	.....	.....
Jan. 29, 1902, to Dec. 1, 1902	.....	.....	.....	.....	.....	.....	.....	.....	164 35	2.24

* The time here given is for a complete closing of the regulators. In addition to this the records show a partial closure for 1216½ hours during the year

§ From July 12, 1902, to Aug. 14, 1902, no records were obtained from this register as the gates were undergoing repairs.

CHARLES RIVER DAM.

Under the provisions of Chapter 105 of the Acts of the Legislature approved June 13, 1901, a committee of three persons was appointed by the Governor of the Commonwealth as a committee to " investigate and report upon the feasibility and desirability of constructing and maintaining a dam across Charles River between Boston and Cambridge."

In the latter part of the year 1901 the Committee so appointed began its hearings, and statements were presented by the various cities and towns directly interested explaining the present conditions of public works likely to be affected by such a construction, and plans for future work. Interested private parties also made statements for and against the project. The Committee still has the matter under consideration, the services of an expert civil engineer having been secured to study some of the many important questions raised. Very extensive use has been made in these studies by the engineer of the Committee of the data acquired in this office, of observations relating to rainfall, operation of the Metropolitan sewer regulators, run off from sewer districts, etc., in its relation to the effect the construction of the dam might have upon the operation of the sewers, the future sanitary condition of the Charles River basin, the construction and maintenance of parks, bridges, etc.

The questions raised in a consideration of this project are many and important and some of them are very difficult to answer definitely.

The report of the Committee to be made in January, 1903, will be awaited with interest.

WATER WORKS.

The following statement shows the condition of the water in the various reservoirs since 1870, and affords a ready means of comparison of interesting data for the different years :—

Year.	*Annual rainfall.	FRESH POND. Elevation of high water, 16.85.				STONY BROOK BASIN. Elevation of crest of dam, 81.00.						HOBBS BROOK BASIN. Elevation of crest of dam, 181.00.			
		Highest Water.		Lowest Water.		Highest Water.		Lowest Water.		No. of days water wasted over dam	Number of Gallons Wasted	Highest Water.		Lowest Water.	
		Date.	El	Date.	El.	Date.	El.	Date.	El.			Date.	El.	Date.	El.
1870	41.53	April 21	16.85	Nov. 22	12.44										
1871	40.09	May 8	15.32	Oct. 5	12.68										
1872	51.98	Oct. 1	16.17	Dec.19,'71	13.00										
1873	46.10	April 2	16.55	Nov. 7	12.52										
1874	41.87	June 8	15.24	Nov. 27	11.80										
1875	51.46	June 24	12.60	Feb. 23	8.97										
1876	43.60	May 31	13.27	Jan. 6	10.60	Conduit from Fresh to Little Pond completed.									
1877	48.93	April 7	16.31	Oct. 4	12.05	Filter gallery built at Little Pond—Water drawn to Fresh Pond from Oct. 11 to end of year.									
1878	50.99	May 1	16.43	Nov. 17	13.54	Water admitted to Fresh Pond through conduit from July 26 to the end of the year.									
1879	39.64	May 1	15.80	Nov. 28	12.11										
1880	33.31	April 5	13.08	Nov. 30	8.34	Water admitted to Fresh Pond through conduit from Sept. 28 to the end of the year.									
1881	42.85	April 18	16.04	Feb. 9	7.73										
1882	39.62	Mar. 28	15.87	Nov. 30	10.69										
1883	29.75	April 14	11.93	Nov. 26	5.91	Water admitted to Fresh Pond through conduit from Jan. 24 to April 13.									
1884	46.07	April 27	14.08	Jan. 1	5.54	Water admitted to Fresh Pond through conduit from Jan. 16 to April 10.									
1885	48.98	May 4	10 61	Oct. 29	5.95	Water admitted to Fresh Pond through conduit from Feb. 10 to Mar. 2.									
1886	46.12	May 12	13.74	Dec. 1	6.62	Water admitted to Fresh Pond through conduit from Jan. 13 to Mar. 31. Conduit abandoned 1887.									
1887	43.99	May 1	8.00	Nov. 5	3.32	Aug. 15	75.00	Jan. 22	†51.70						
1888	60.01	May 13	16.25	Jan. 1	9.66	Mar. 22	83.40	Dec.11,'87	72.43	244	7,315,800,000				
1889	60.08	Jan. 8	16.62	Oct. 12	13.72	Dec.19,'88	82.91	July 2	80.75	363	10,202,600,000				
1890	49.32	April 10	16.74	July 27	13.69	Mar. 24	82.40	Sept. 6	71 66	302	8,929,800,000				
1891	49.11	Mar. 24	16.78	Aug. 26	12.19	Jan. 23	83.31	Nov. 10	72.20	209	8,214,400,000				
1892	41.17	May 23	16.64	Aug. 3	12.29	Mar. 11	82.80	Nov. 10	69.56	202	3,804,100,000				
1893	39.52	May 5	17.07	Nov. 3	11.67	Mar. 15	82.83	Sept. 9	64.50	133	4,735,800,000				
1894	35.66	June 1	17.15	Sept. 18	10.65	Mar. 7	82.24	Oct. 25	68.40	164	2,852,600,000				
1895	49.72	June 2	17.30	Sept. 15	11.44	April 15	82.56	Dec 11,'94	74.80	224	5,304,200,000				
1896	41.77	April 27	16.49	Nov. 24	10.95	Feb. 7	83.30	Sept. 5	66.13	225	5,852,700,000				
1897	43.35	June 11	17.34	Dec.1,'96	11.41	Mar. 25	82.00	Nov. 1	71.02	256	4,016,600,000				
1898	53.09	May 2	17.35	Oct. 19	15.23	Feb. 22	82.27	Aug. 5	75.42	260	5,704,600,000	Oct. 27	181.53	Dec.16,'97	‡159.00
1899	44.96	Jan. 27	17.15	Sept. 19	13.17	Mar. 6	82.25	July 8	75.30	175	6,969,500,000	Mar. 20	181.27	Nov. 30	175.93
1900	51.29	April 23	17.46	Sept. 16	13.96	Mar. 2	82.81	July 9	77.04	145	4,447,100,000	Mar. 17	181.85	Jan. 10	175.10
1901	46.87	May 25	17.62	Nov. 17	14.45	April 8	82.54	Feb. 26	78.10	159	6,073,150,000	April 8	181.85	Dec.1, '00	177.30
1902	44.58	April 14	17.24	Nov. 30	13.45	Mar. 1	83.92	July 8	79.00	182	6,567,175,000	March 2	182.15	Oct.27, '02	178.28

*Record of annual rainfall taken at Harvard Observatory during the years 1870 to 1879 inclusive, at Fresh Pond from 1880 to 1889, and at Stony Brook from 1890 to 1902.

†The water gates at Stony Brook Dam were first closed June 9, 1887, with water at elevation 58.80. Water was formally introduced into Fresh Pond Nov. 15, 1887, and first flowed over dam Jan. 3, 1888.

‡The water gates at Winter St. Dam were first closed Dec. 16, 1897. The basin filled in 247 days and water first flowed over dam Aug. 20, 1898.

Water wasted over the Stony Brook Dam as follows :

December, 1901	786,700,000 gallons
January, 1902	929,000,000 "
February, 1902	527,050,000 "
March, 1902	2,740,125,000 "
April, 1902	1,247,350,000 "
May, 1902	311,000,000 "
June, 1902	50,000 "
July, 1902	——— "
August, 1902	——— "
September, 1902	——— "
October, 1902	19,700,000 "
November, 1902	6,200,000 "

Total amount passing the dam during the year, 6,567,175,000 gallons.

TABLE: SHOWING COMPARISON BY MONTHS OF THE TOTAL PRECIPITATION AT STONY BROOK BASIN, HOBBS BROOK BASIN, HARVARD OBSERVATORY AND CAMBRIDGE CITY HALL; ALSO THE NUMBER OF DAYS IN WHICH RAIN FELL AT CITY HALL, DECEMBER 1, 1901, TO DECEMBER 1, 1902.

Point of Observation.		1901.	1902.										
		Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Total
Stony Brook Basin.	Total Precipitation.	7.38	1.88	4.12	6.38	3.94	1.30	2.32	3.84	3.56	4.32	4.48	1.06	44.58
Hobbs Brook Basin.	Total Precipitation.	8.15	1.62	3.00	5.10	3.85	1.62	2.22	3.12	4.09	4.04	4.46	0.97	42.24
Harvard Observatory.	Total Precipitation.	8.24	2.36	4.76	6.40	3.57	1.26	2.08	3.09	2.86	3.00	4.47	1.19	43.28
City Hall.	Total Precipitation.	7.29	2.00	6.59	4.95	3.24	1.04	2.22	3.48	2.81	2.46	4.34	0.93	41.35
	Numberofdays rain fell.	8	6	8	12	4	7	11	10	9	9	7	5	96

PARK DEPARTMENT.

The new construction work of the year has largely been confined to sections D and F of the Charles River Parkway.

The park road in extension of Magazine Street from Granite Street to the Charles River Road and thence to Brookline Street has been handsomely macadamized and finished with grass and tree plantings, making a fine driving connection with Brookline Street, Brookline Bridge and the territory beyond of Brookline and Boston.

TABLE SHOWING RAINFALL AT STONY BROOK BASIN AT WESTON, AT HOBBS BROOK BASIN IN WALTHAM, AND THE CITY HALL AND HARVARD OBSERVATORY, CAMBRIDGE, DECEMBER 1, 1901, TO DECEMBER 1, 1902.

Day of Month.	1901. DECEMBER.				1902. JANUARY.				FEBRUARY.				MARCH.				APRIL.				MAY.				JUNE.				JULY.				AUGUST.				SEPTEMBER.				OCTOBER.				NOVEMBER				Day of Month.
	Stony Brook	Hobbs Brook.	City Hall.	Harvard Observ.	S. B.	H. B.	C. H.	H. O.	S. B.	H. B.	C. H.	H. O.	S. B.	H. B.	C. H.	H. O.	S. B.	H. B.	C. H.	H. O.	S. B.	H. B.	C. H.	H. O.	S. B.	H. B.	C. H.	H. O.	S. B.	H. B.	C. H.	H. O.	S. B.	H. B.	C. H.	H. O.	S. B.	H. B.	C. H.	H. O.	S. B.	H. B.	C. H.	H. O.	S. B.	H. B.	C. H.	H. O.	
1											0.30	0.03	1.85	1.50	0.05	2.00						0.28		0.29					0.10	0.08	0 15	0.11									0.10	0.18	0.45	0.30					1
2											0.60	0.79			0.13	0.03																T					0.10		0.13	0.15	0.39	0.35		0.25					2
3		0.15		0.20		0.08		0.06	0.45	0.71		0.35	0.21	0.15		0.08					0.06			0.03			0.10			0.48	0.33	0.01															3
4	1.40	1.65	1.60	1.68					0.36						0.10										0.12			0.08	0.46			0.33		0.20	0.05		0.60	0.40	0.63	0.39				T					4
5										0.02		T		0.72	1.60						0.19	0.20	0.15	0.20				T					0.41			0.05	0.10			0.10			0.37				T			5
6													1.24			1.23																0.01		0.63	0.30	0.01					0.59		0.33	0.81				T			6
7							0.60								0.09	0.04											0.05					T	0.37			0.37		0.70	0.24	0.46		0.75				0.18		T		7
8					0.28	0.24		0.59											0.93						0.07	0.20	0.20	0.05		0.12	0.10	0.08		0.60	0.15	0.14	0.66			0 05									8
9				T											0.67	0.42	1.80	1.80	0.74	2.28					0.12			0.07	0.14				0.30						0.22										9
10	0.66	0.65	0.83	0.85			0.05	0.01					1.05	0.75		0.27	0.50	0.55		0.15							0.03			0.35	0.30	0.29					0.37	0.40		0.31									10
11						0.02	0.18	0.02										0.05		T					0.07	0.15		0.04	0.33					1.30	1.25	0.24							0.24						11
12					0.62	0.55	0.37	0.83								T				T							0.02						1.46	0.32		1.10					1.40	1.15	0.88	1.13	0.13	0.08		0.08	12
13			0.05	T								T			0.05	T						0.06	0.04	0.03		0.30	0.30	0.37								T				T		0.06	0.13	0.03	13
14	0.12	0.05		0.08								T	0.24		0.05	0.12									0.39												0.40	0.45	0.20	0.40							0.04		14
15	0.65	0.42	1.28	0.96																					0.25		0.22	0.33			0.70							0.13										15
16	0.86	1.80		0.52																						0.15		0.02	0.49	0.35		0.54																16
17				T							2.04	0.70	0.38	0.50	0 84	0.70									0.08			T			0.05														0.02	T		17
18	0.10	0.09		0.15					1.51	0.80		0.80		0.08		0.11													0.55	0.10		0.05												T				18
19															0.10	T							0.42			0.40	0.22				0.15	0.01	0.11	0.30	0.43	0.35	0.05	0.70	0.11	0.20									19
20				T									0.18	0.13	0.21	0.17					0.50	0.42		0.47	0.27			0.24	0.34	0.70	1.60	0.36	0.32			T	0.97			T								T	20
21											0.20		0.19	0.20		0.16											0.64	0.04	1.20	0.75	0.04	1.22		0.20	0 06															21
22					0.67	0.58	0.69	0.68	0.39	0.32	0.35	0.72				T									0.60	0.60		0.41	0.06	0.05	0.06	0.01			0.10	0.01															22
23		0.63			0.14			0.03	0.22																				0.17	0.10		0.06	0.10	0.10	0.23	0.33						0.33	0.25	0.24				0.02	23
24	0.55		0.73	0.74																				T																	0.26								24
25	0.20			0.02							0.10																				T				0.24											T	25
26		0.08							0.90	0.95	1.05	1.19						0.60	0.52	0.31		0.10	0.02	0.02	0.26	0.32	0.35	0.34				0.01	0.38	0.44		0.26				T					0.20	0.13	0.67	0.41	26
27	0.73	0.67	0.80	0.81	0.17	0.13	0.11	0 14	0.29	0.20		0.18			0.08		0.60			0.13		0.11	0.22							0.04			0.11				0.10	0.17	0.38	0.18						0.63	0.40	0.08	0.59	27
28				0.08							1.95	T	0.07		0.10	0.08					0.55	0.45		0.18								T					0.47	0.65		0.21	1.24	1.70	1.82	1.45	0.10	0.12		0.02	28
29	0.40	0.65	0.90	0.68									0.38	1.04	1.07	0.76											0.09										0.48	0.45	0.42	0.51	0.50			0.29					29
30	1.12	0.81	1.10	1.36		0.02		T					0.56			0.77	1.04	0.85	1.05	0.70				T	0.09	0.10		0.09				T					0 02	0.12		0.04									30
31	0.59	0.50		0.11									0.03	0.03		T																												0.03			31
Total	7.38	8.15	7.29	8.24	1.88	1.62	2.00	2.36	4.12	3.00	6.59	4.76	6.38	5.10	4.95	6.40	3.94	3.85	3.24	3.57	1.30	1.62	1.04	1.26	2.32	2.22	2.22	2.08	3.84	3.12	3.48	3.09	3.56	4.09	2.81	2.86	4.32	4.04	2.46	3.00	4.48	4.46	4.34	4.47	1.06	0.97	0.93	1.19	

The total length of this improvement is about 1,500 lineal feet. To provide for the surface drainage fourteen wooden outlets were put in. This construction emphasizes anew the desirability of a radical improvement in this avenue of approach to Cambridge, by making the widening and elevation of Brookline Street and the Bridge, or their location at some other point. Some studies have been made of this locality with that in view.

At section F the work begun last year on the old wharves near the foot of Dunster and DeWolf Streets has been practically completed; 3,958 tons of stones from the old seawalls were removed and placed in the line of the beach east of Brookline Street. A large amount of piling was also removed, the earth of the wharves cut back and the beach and roadway paths formed.

About 970 feet of roadway was built here with walks and tree planting.

Fifteen catch basins and the necessary drain pipe for outlets were put in.

The Park roadway from Boylston Street easterly to DeWolf Street (about 1,500 feet in length) was surfaced with gravel.

The matter of a new bridge at the crossing of Boylston Street over Charles River has been the subject of some inquiry both by the Cambridge and Metropolitan Park Commission and interested citizens.

Preliminary studies for a bridge at this point were prepared and submitted as suggestions of what might be done at this point.

The concrete base for the Charles Sumner statue located in the small common at the corner of Massachusetts Avenue and Kirkland Street was placed and the requisite grading, etc., done.

The usual miscellaneous work required by the Park Department has been done.

Three assistants have been employed during a greater portion of the year on work connected with the Park Department.

Respectfully submitted,

L. M. HASTINGS,
City Engineer.

REPORT OF THE BOARD OF HEALTH

To the Honorable, the City Council: —

In compliance with the Public Statutes creating Boards of Health and defining their duties, we have the honor to make our annual report for the year ending December 31, 1902.

We respectfully call the attention of your honorable body to the following list of complaints investigated and nuisances abated during the year: —

Full, overflowing, and offensive privy vaults	6
Offensive and defective water-closets	123
Full and defective cess-pools and catch-basins	7
No traps to sinks	10
Leaky and defective traps	31
Defective drainage, open and defective drains	32
Plumbing tests made	44
Filthy yards	199
Filthy stables and cow sheds	15
Manure in yards and lots	5
Wet and damp cellars	14
Stagnant water on premises	18
Dead animals on premises	14
Dead hens on premises	3
Filthy buildings	19
Filthy cellars	64
New water-closets put in	32
Houses vacated	2
Dirty hen-coops	8
Miscellaneous	18
Total	664
Number of inspection	4,040
Number of subsequent inspections	3,801
Total	7,841
Number of notices served	132
Slop closets and sluice vaults abated	13
Offal receptacles cleaned and new ones provided	163
Vacant lots cleaned	3
Defective plumbing in whole house remedied	11
Privy vaults abated	13
Cess-pools abated	6
Number of houses placarded	348
Premises disinfected	1,130
Number of cellars from which hens were removed	2
Number of patients taken to the Diptheria Hospital	146
Number of patients taken to the Cambridge Hospital	29
Number of patients taken to the Small-pox Hospital	178

This is a much smaller number of inspections than has been made in any one year for several years and is due to the fact, that, owing to the insufficient appropriation made to this department, two of the three sanitary inspectors were taken from their regular work and placed on new work in connection with the Small-pox Hospital.

MEDICAL INSPECTION OF SCHOOLS.

The diseases discovered in the schools and the number of cases were as follows: —

Chicken-pox	22
Measles	3
Mumps	12
Pediculosis	166
Scarlet fever	1
Whooping-cough	28
Diseases of ear	8
Diseases of eye	92
Diseases of nervous system	7
Diseases of respiratory system	5
Diseases of the skin	84
All other diseases	309
Total	737

DIPHTHERIA HOSPITAL.

January 1, 1902, there were in hospital 11 cases remaining from the previous year. From January 1 to December 31, 1902, there were admitted 146 cases. Of laryngeal diphtheria there were 10 cases, and no deaths. Of the ordinary form there were 133 cases, and 9 deaths, a fatality of 6.76 per cent. Of all cases the fatality was 6.29 per cent.

The stay in hospital and the termination of the illness of these cases (both clinically and bacterially diphtheria) were as follows: —

Days.	Recovered.	Died.	Total Days.	Days.	Recovered.	Died.	Total Days.
Under 1	..	2	2	32	4	1	160
1	..	2	2	33	2	..	66
2	..	1	2	34	2	..	68
3	..	1	3	35	2	..	70
6	1	..	6	37	1	..	37
8	..	1	8	38	4	..	152
9	2	1	27	39	1	..	39
10	1	..	10	43	3	..	129
11	2	..	22	44	2	..	88
12	4	..	48	47	2	..	94
13	2	..	26	49	1	..	49
14	5	..	70	51	1	..	51
15	6	..	90	55	2	..	110
16	3	..	48	59	1	..	59
17	5	..	85	60	1	..	60
18	5	..	90	63	1	..	63
19	5	..	95	66	1	..	66
20	5	..	100	67	2	..	134
21	7	..	147	68	1	..	68
22	3	..	66	70	1	..	70
23	3	..	69	72	1	..	72
24	9	..	216	73	1	..	73
25	2	..	50	81	1	..	81
26	1	..	26	91	1	..	91
27	1	..	27	107	1	..	107
28	6	..	168	122	1	..	122
29	11	..	319				
30	3	..	90	Total...	134	9	4,122
31	1	..	31				

There were also admitted 10 patients all of whose cultures taken for diagnosis proved negative. The stay in hospital and termination of the illness were as follows: —

Days.	Recovered.	Died.	Total Days.	Days.	Recovered.	Died.	Total Days.
2	2	..	4	14	1	...	14
3	2	...	6	18	1	...	18
5	1	...	5	20	1	...	20
6	1	...	6				
8	1	...	8	Total...	10	...	81

Of all cases reported during the year 31.50 per cent. were treated in the hospital. If all the cases are accepted as true diphtheria on clinical evidence alone the hospital fatality was 6.33 per cent. and the fatality of the cases treated outside of the hospital 8.17 per cent.

SMALL-POX.

The epidemic of small-pox which broke out in Cambridge in October, 1901, continued with increasing severity during the spring months of 1902 and then died away during the following summer. The hospital which had been established on New Street at the first signs of the disease in the fall of 1901 was enlarged as the occasion required by the impressing of other neighboring dwellings. The whole street was then fenced off and travel nearby prohibited.

In dealing with the disease the Board depended primarily upon vaccination and the isolation of the person infected. Immediately upon the discovery of a case of small-pox the patient was taken to the hospital and all the persons living in the same house with the infected persons — and in thickly settled portions of the City all the persons in neighboring houses for the distance of a city block — were vaccinated by the physicians of the Board and the premises or apartments occupied by the infected person were disinfected with formaldehyde gas. Every day during the next two weeks the premises were visited by a physician of the Board and all persons living there were inspected. Except in a few cases, well persons were not quarantined after the removal of the sick person, for it was believed, and afterwards it seemed to be satisfactorily proved, that a quarantine maintained by force is not only extremely expensive and oppressive but is inefficient, inoperative, and even dangerous. In a thickly settled district persons who are unwilling to be restrained usually can escape by window or roof and disappear, or else, at the first rumor of small-pox,

people scatter from the house before the arrival of the authorities and are, therefore, lost before they can be vaccinated and often before their identity is known. Following such persons by police or detectives is, of course, difficult and if there are many such persons a matter of great expense. One experience of this kind the Cambridge Board of Health had. Owing to groundless reports it became rumored one evening that a quarantine was to be placed by the authorities upon a certain block of houses. Next morning it was found that the persons under surveillance had fled in the night, in some cases leaving behind them their household furniture. Many of these persons were subsequently heard of in various parts of Cambridge and other neighboring communities where they gave a bad fright to persons who learned their histories. Under the scheme of daily inspection by competent physicians on the other hand, persons were enabled to attend to their daily duties; and yet, if any one of them developed suspicious symptoms, it was known at once and the person isolated before the disease reached the contagious stage.

Early in October stations were opened over the City where any persons who so desired could be vaccinated free of cost. At least one of these stations was open most of the time from that day to August, 1902 In March, the Board passed a vote requiring all inhabitants of the City who had not been successfully vaccinated within the last five years to be vaccinated at once. Failure to comply with this order rendered the delinquent liable to a fine of $5.00 in the Police Court. Free vaccination was offered to all by the City. A few weeks later the whole City was divided into districts and physicians employed by the Board of Health went from house to house vaccinating all inhabitants whom they could find. In the summer a portion of the City was again visited by physicians each accompanied by a police officer and all persons who could not show signs of successful vaccination and who refused to be vaccinated were summoned to court. A card catalogue was made at the office of the Board of every house in a large portion of the City, a card for each house, and on the card was written the name of every person in the house and when he had been last vaccinated.

After the disease reached its height at the end of June, there were numerous cases for a few weeks which were attributable to sources outside of the City and to the fact that a quantity of the vaccine used by physicians in vaccinating persons who had been exposed to the disease was either adulterated or otherwise almost valueless, and to one or two other apparent and unavoidable causes. During the final house to house vaccination by a corps of physicians, however, the cases rapidly diminished and by August 18th the period of incubation from the last discovered case had passed. After September 1st only a few sporadic cases of the disease occurred.

At the stations for free vaccination above referred to, 5,793 persons were vaccinated during the autumn of 1901. 2,745 persons were vaccinated at these stations in 1902. When compulsory vaccination was ordered by the Board of Health and public vaccinators were sent from house to house, 21,685 more persons were vaccinated. A communication was also addressed to the physicians of the City inquiring how many persons had been vaccinated by them in their private practice. Replies were received from about two-thirds of the physicians addressed. These replies showed that 25,990 persons had been vaccinated in Cambridge by these physicians.

Tables of the mortality among persons vaccinated and unvaccinated will be found in the report of the Medical Inspector to the Board.

E. EDWIN SPENCER,
CHARLES HARRIS,
WM. RODMAN PEABODY,
Board of Health of City of Cambridge.

BACTERIOLOGICAL LABORATORY,
CITY HALL, CAMBRIDGE, January 1, 1903.

To the Board of Health:—

GENTLEMEN:—I beg to submit the following report of work done in the laboratory during the year 1902. The total number of examinations made was 2,581 distributed, as follows:—

	Throat Cultures for Diphtheria.	Sputum Examinations for Tuberculosis	Blood Examinations for Typhoid Fever.	Total.
January	242	23	8	273
February	169	18	15	202
March	240	15	35	290
April	245	20	27	292
May	340	28	24	392
June	248	16	21	285
July	174	22	27	223
August	64	12	15	91
September	77	13	17	107
October	104	15	29	148
November	100	12	22	134
December	100	21	23	144
Total	2,103	215	263	2,581

The throat cultures for diphtheria may be divided into two groups, the first comprising those taken for the purpose of diagnosis, the second including those taken for release after the disappearance of the clinical signs.

CULTURES FOR DIAGNOSIS.

	Positive.	Negative.	No Growth.	Total.
January	38	43	1	82
February	19	44	5	68
March	39	68	1	108
April	34	49	4	87
May	62	49	0	111
June	35	45	0	80
July	25	21	0	46
August	13	11	0	24
September	18	20	0	38
October	13	31	0	44
November	13	32	1	46
December	9	46	1	56
Total	318	459	13	790

CULTURES FOR RELEASE.

	Positive.	Negative.	No Growth.	Total.
January	83	75	2	160
February	48	49	4	101
March	65	66	1	132
April	90	66	2	158
May	116	107	6	229
June	68	100	0	168
July	61	66	1	128
August	1	28	1	40
September	11	28	0	39
October	37	23	0	60
November	27	26	1	54
December	18	26	0	44
Total	635	660	18	1,313

The 790 cultures for diagnosis were from 723 cases, 67 being second cultures from cases where the first test was doubtful or unsatisfactory. During the year there were 462 cases of diphtheria reported to the Board of Health but the diagnosis was confirmed by culture in only 294 cases. In 167 cases the first culture was taken after the disappearance of clinical signs from the throat, and 96 of these cases were negative at the first examination. As in many of these cases the release culture was found to be negative within a few days after the report of the case, it seems probable that a certain proportion of them were not true diphtheria. The fact that the clinical diagnosis was confirmed by bacteriological test in only 64 per cent. of the reported cases, shows a regretable lack of inclination on the part of the physicians of the City to avail themselves of the facilities of the laboratory.

Of the 215 sputa examined for tuberculosis, 65 were positive and 150 negative. Of 263 samples of blood tested for the Widal reaction for typhoid, 96 were positive and 167 negative.

There have been no changes of importance in the methods of examination used during the past year.

Respectfully submitted,

EUGENE A. DARLING, M. D.

OFFICE OF THE BOARD OF HEALTH,
CAMBRIDGE, December 31, 1902.

To the Board of Health of the City of Cambridge: —

The undersigned Clerk to the Board of Health herewith submits a statement of the expenditures of the Health Department for the financial year ending November 30, 1903.

GENERAL EXPENSES.

Appropriation made by the City Council	$5,000 00

AMOUNT EXPENDED.

Paid Cambridge Hospital for care of 22 scarlet fever patients	$2,748 34	
Bacteriological supplies	192 27	
Chemicals, formaldehyde lamps and maintenance	190 10	
Stationery and office supplies	108 92	
Car tickets	450 00	
Carriage hire	36 50	
Printing and postage	319 41	
Telephones	249 51	
Gas	16 20	
Legal services	4 36	
Keep of horse, shoeing, storage of vehicles, wagon and harness repairs	512 45	
Public sanitaries	52 47	
Burial of animals	82 00	
Expenses of Mr. Underwood's lecture on Fresh Pond Marshes and Cambridge Wet Lands, illustrated, and collation	26 50	
		4,989 03
Balance of appropriation unexpended		$10 97

SALARIES.

Appropriation made by City Council	$12,000 00

AMOUNT EXPENDED.

Salary of medical inspector and physician to the Board	$3,000 00	
" clerk to the Board	1,200 00	
" secretary	800 00	
" bacteriologist	1,080 00	
" school inspectors (8)	1,348 81	
" sanitary inspectors (3)	2,793 10	
" plumber	950 00	
" driver	772 87	
		11,944 78
Balance of appropriation unexpended		$55 22

DIPHTHERIA HOSPITAL.

59 Reservoir Street.

Appropriation made by City Council			$10,000 00
AMOUNT EXPENDED.			
Salary of physician	$1,242 74		
" matron	916 40		
" nurses	2,537 40		
" cook	312 00		
" laundress	312 76		
" house-man	728 00		
" servants	251 04		
Consulting physician	15 00		
		$6,315 34	
Medical supplies	$684 85		
Furnishings	526 67		
Coal and wood	186 85		
Gas	119 60		
		1,517 97	
Groceries	$500 53		
Provisions	816 03		
Milk	354 48		
Butter and eggs	321 42		
Ice	57 28		
		2,049 74	
Miscellaneous:			
Paints and varnishes	$18 88		
Repairs	38 28		
Telephone	51 05		
Stationery	5 77		
Express	2 55		
		116 53	
			9,999 58
Balance of appropriation unexpended			$ 42

SMALL-POX.

Original appropriation by City Council			$9,000 00
Additional " May 28, 1902			15,000 00
" " July 3, 1902			3,600 00
" " Oct. 1, 1902			19,000 00
" " Nov. 26, 1902			500 00
			$47,100 00
AMOUNT EXPENDED.			
Cost of vaccination:			
Physicians	$12,741 25		
Vaccine and medical supplies	2,457 63		
Advertising and printing	183 58		
		$15,382 46	
Medical service:			
Dr. Brough, small-pox physician	$4,800 00		
Dr. Wright, eye specialist	30 00		
Clerical service	110 00		
		4,940 00	
Amounts carried forward		$20,322 46	$47,100 00

Amounts brought forward		$20,322 46	$47,100 00
Medical supplies		2,089 86	
Hospital furnishings		2,015 52	
Nurses	$6,196 47		
Servants	1,579 67		
Driver	347 20		
Men to disinfect	207 00		
		8,330 34	
Provisions, bakery supplies	$55 32		
Groceries	1,839 41		
Provisions	1,563 67		
Milk	516 27		
Ice	72 68		
		4,047 35	
Coal and wood	$219 86		
Laundry	1,292 25		
Clothing	186 22		
		1,698 33	
Burials (31)		1,495 00	
Carriage hire	$1,304 00		
Car tickets	50 00		
		1,354 00	
Booths, Cost of 3	$884 00		
Moving same to New Street	85 03		
Materials and labor building	296 21		
Repairs	41 04		
		1,306 28	
Miscellaneous:			
Care of and supplies for insane patient	$52 90		
Board of persons removed from house seized for hospital	194 64		
Rent paid J. F. O'Brien	28 00		
Moving furniture	51 50		
Cleaning vaults	85 00		
Disinfecting lamps	161 10		
Legal services	40 80		
Telephone	75 90		
Stationery	22 40		
Express	8 80		
		721 04	
Damages:			
Paid Patrick McQuiggan award by City Council for the taking of his house 51 New Street for small-pox hospital	$3,500 00		
Paid John Murphy for damages sustained by being obliged to move from New Street	100 00		
Paid Patrick O'Connell for damage to carpet 275 Broadway by disinfecting lamp	17 00		
Paid Joseph E. Pierce for damage to furniture 77 Norfolk Street by disinfecting lamp	10 50		
		3,627 50	
			47,007 68
Balance of appropriation unexpended			$92 32

Respectfully submitted,

JAMES B. SOPER,

Clerk to Board of Health.

VITAL STATISTICS.

Death Rate per 1,000 Living, from All Causes. Estimated Population, 96,334.

1893	1894	1895	1896	1897	1898	1899	1900	1901	1902
20.89	19.56	18.40	18.87	17.93	17.65	17.25	16.87	16.83	15.09

The mean annual death rate for the ten years, 1893 to 1902, inclusive, was 17.93.

In calculating death rates, the deaths of non-residents occurring in the City were excluded, and the deaths of residents wherever they occurred were included.

The estimate of population was furnished by the State Board of Health

The death rate for the year just past is always a little below the correct rate, as the returns of the deaths of some residents which occurred at a distance from home are not received till after the report has been made up. This error is corrected in the next annual report.

SCARLET FEVER.

CASES REPORTED.

Ward.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
1.....	1	2	3	1	0	0	2	0	10	4	1	5	29
2.....	8	4	1	2	3	6	9	3	12	21	8	8	85
3.....	0	0	0	0	2	1	12	0	1	5	4	9	34
4.....	0	2	4	2	1	1	0	1	6	13	4	9	43
5.....	0	1	0	0	2	0	1	0	1	0	1	2	8
Total.....	9	9	8	5	8	8	24	4	30	43	18	33	199

The reported cases of Scarlet Fever show an increase of 98 cases over those reported in 1901.

Ward 1 shows an increase of 16 cases.
Ward 2 shows an increase of 59 cases.
Ward 3 shows an increase of 8 cases.
Ward 4 shows an increase of 15 cases.
Ward 5 shows no change.

Cases Reported Weekly.

Jan. 4	4	July 5	7
" 11	3	" 12	5
" 18	3	" 19	7
" 25	0	" 26	7
Feb. 1	1	Aug 2	2
" 8	0	" 9	0
" 15	2	" 16	0
" 22	4	" 23	3
Mar. 1	3	" 30	1
" 8	0	Sept. 6	5
" 15	3	" 13	3
" 22	1	" 20	4
" 29	1	" 27	10
April 5	2	Oct. 4	15
" 12	0	" 11	11
" 19	1	" 18	11
" 26	2	" 25	7
May 3	2	Nov. 1	8
" 10	1	" 8	3
" 17	2	" 15	4
" 24	3	" 22	4
" 31	2	" 29	6
June 7	1	Dec. 6	9
" 14	1	" 13	12
" 21	1	" 20	8
" 28	1	" 27	4

Age and Sex Distribution of 196 Cases.

Age.	Males.	Females.	Persons.
0– 1 Year	1	0	1
1– 2 Years	2	3	5
2– 3 "	6	7	13
3– 4 "	2	9	11
4– 5 "	14	10	24
5–10 "	55	43	98
10–15 "	10	15	25
15–20 "	5	5	10
20–30 "	3	5	8
40–50 "	0	1	1
Total	98	98	196

Death Rate per 1000 Living.

1893	1894	1895	1896	1897	1898	1899	1900	1901	1902
0.87	1.27	0.20	0.07	0.11	0.06	0.08	0.09	0.08	0.09

Morbidity, or Sick Rate, per 1000 Living.

8.84	11.37	3.59	2.36	2.68	1.38	1.75	1.91	1.07	2.06

Fatality, or Case Death Rate, Percentage.

9.85	11.20	5.80	3.03	4.32	4.91	5.06	5.11	7.92	4.52

For the ten years recorded above the mean annual death rate was 0.29; the mean annual morbidity, 3.70; the mean annual fatality, 6.17.

DIPHTHERIA.

CASES REPORTED.

Ward.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
1.....	18	4	14	15	45	18	9	2	7	3	1	1	137
2.....	20	9	13	20	15	15	5	5	4	5	5	6	122
3.....	7	4	6	6	0	7	2	3	3	0	1	3	42
4.....	11	12	13	19	18	12	8	3	7	5	7	4	119
5.....	3	3	6	1	7	3	7	2	2	3	2	1	40
Total.....	59	32	52	61	85	55	31	15	23	16	16	15	460

The reported cases of Diphtheria show a decrease of 155 cases from those reported in 1901.

Ward 1 shows an increase of 66 cases.
Ward 2 shows a decrease of 97 cases.
Ward 3 shows a decrease of 44 cases.
Ward 4 shows a decrease of 57 cases.
Ward 5 shows a decrease of 23 cases.

Cases Reported Weekly.

Jan. 4	9	July 5	21
" 11	22	" 12	5
" 18	19	" 19	3
" 25	6	" 26	3
Feb. 1	8	Aug. 2	7
" 8	7	" 9	3
" 15	9	" 16	4
" 22	9	" 23	2
Mar. 1	11	" 30	5
" 8	4	Sept. 6	6
" 15	13	" 13	4
" 22	13	" 20	5
" 29	15	" 27	5
April 5	10	Oct. 4	5
" 12	10	" 11	4
" 19	13	" 18	5
" 26	17	" 25	2
May 3	19	Nov. 1	4
" 10	15	" 8	4
" 17	23	" 15	3
" 24	23	" 22	2
" 31	19	" 29	6
June 7	10	Dec. 6	5
" 14	11	" 13	6
" 21	15	" 20	1
" 28	12	" 27	2

Age and Sex Distribution of 454 Cases.

Age.	Males.	Females.	Persons.
0– 1 Year	5	3	8
1– 2 Years	11	15	26
2– 3 "	16	16	32
3– 4 "	20	10	30
4– 5 "	28	27	55
5–10 "	66	102	168
10–15 "	26	31	57
15–20 "	5	15	20
20–30 "	19	15	34
30–40 "	5	13	18
40–50 "	1	3	4
50–60 "	0	2	2
Total	202	252	454

Death Rate per 1000 Living.

1893	1894	1895	1896	1897	1898	1899	1900	1901	1902
0.53	0.76	1.29	0.77	0.60	0.34	0.61	0.78	0.62	0.36

Morbidity, or Sick Rate, per 1000 Living.

1.33	2.24	7.27	5.43	3.74	1.73	5.58	10.00	6.53	4.77

Fatality, or Case Death Rate, Percentage.

36.8	32.5	17.8	13.6	15.8	19.0	10.9	7.78	9.59	7.60

For the ten years recorded above the mean annual death rate was 0.66; the mean annual morbidity, 4.86; the mean annual fatality, 17.13.

TYPHOID FEVER.

CASES REPORTED.

Ward.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
1.....	1	1	8	2	4	3	2	0	1	3	2	2	29
2.....	1	2	3	3	1	0	3	3	0	3	2	3	24
3.....	1	8	10	4	4	1	3	3	1	2	1	5	43
4.....	0	1	3	3	1	0	1	3	2	2	1	4	21
5.....	1	0	1	1	1	1	2	0	1	0	1	2	11
Total	4	12	25	13	11	5	11	9	5	10	7	16	128

The reported cases of Typhoid Fever show an increase of 32 cases over those reported in 1901.

Ward 1 shows an increase of 9 cases.
Ward 2 shows a decrease of 4 cases.
Ward 3 shows an increase of 28 cases.
Ward 4 shows a decrease of 8 cases.
Ward 5 shows an increase of 7 cases.

Age and Sex Distribution of 125 Cases.

Age.	Males.	Females.	Persons.
2- 3 Years	1	0	1
3- 4 "	0	1	1
5-10 "	7	6	13
10-15 "	8	13	21
15-20 "	7	8	15
20-30 "	23	10	33
30-40 "	22	3	25
40-50 "	9	6	15
50-60 "	1	0	1
Total	78	47	125

Death Rate per 1000 Living.

1893	1894	1895	1896	1897	1898	1899	1900	1901	1902
0.20	0.29	0.14	0.37	0.14	0.15	0.23	0.16	0.10	0.17

Morbidity, or Sick Rate, per 1000 Living.

1.20	1.50	1.31	3.04	1.22	1.09	1.11	1.20	1.02	1.32

Fatality, or Case Death Rate, Percentage.

17.3	17.5	11.2	11.7	10.4	14.5	20.0	13.5	10.4	13.28

For the ten years recorded above the mean annual death rate was 0.19; the mean annual morbidity, 1.40; the mean annual fatality, 13.97.

MEASLES.

CASES REPORTED.

Ward.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
1.....	33	48	32	19	2	1	1	0	0	0	0	0	136
2.....	3	5	20	8	14	5	1	0	0	1	1	2	60
3.....	0	9	2	0	1	3	0	0	0	0	0	0	15
4.....	3	13	25	10	11	4	1	0	0	0	0	0	67
5.....	10	41	59	14	3	0	1	0	0	0	0	1	129
Total.....	49	116	138	51	31	13	4	0	0	1	1	3	407

The reported cases of Measles show a decrease of 155 cases from those reported in 1901.

Ward 1 shows an increase of 82 cases.
Ward 2 shows a decrease of 128 cases.
Ward 3 shows a decrease of 122 cases.
Ward 4 shows a decrease of 94 cases.
Ward 5 shows an increase of 107 cases.

Cases Reported Weekly.

Jan. 4	11	July 5	2
" 11	11	" 12	1
" 18	5	" 19	0
" 25	14	" 26	2
Feb 1	11	Aug. 2	0
" 8	22	" 9	0
" 15	29	" 16	0
" 22	18	" 23	0
Mar. 1	52	" 30	0
" 8	30	Sept. 6	0
" 15	43	" 13	0
" 22	22	" 20	0
" 29	25	" 27	0
April 5	24	Oct. 4	0
" 12	12	" 11	0
" 19	8	" 18	0
" 26	14	" 25	0
May 3	10	Nov. 1	1
" 10	7	" 8	0
" 17	8	" 15	0
" 24	7	" 22	1
" 31	3	" 29	0
June 7	6	Dec. 6	0
" 14	2	" 13	2
" 21	2	" 20	1
" 28	2	" 27	1

Age and Sex Distribution of 371 Cases.

Age.	Males.	Females.	Persons.
0– 1 Year	4	5	9
1– 2 years	8	9	17
2– 3 "	8	18	26
3– 4 "	9	16	25
4– 5 "	21	13	34
5–10 "	97	81	178
10–15 "	12	16	28
15–20 "	7	3	10
20–30 "	21	16	37
30–40 "	3	3	6
40–50 "	1	0	1
Total	191	180	371

Death Rate per 1000 Living.

1893	1894	1895	1896	1897	1898	1899	1900	1901	1902
0.14	0.00	0.03	0.05	0.03	0.01	0.08	0.00	0.10	0.04

Morbidity, or Sick Rate per 1000 Living.

.....	.....	3.05	2.72	4.78	0.60	5.26	1.50	5.97	4.22

Fatality, or Case Death Rate, Percentage.

.....	.....	1.20	2.20	0.73	1.80	1.69	0.00	1.76	0.98

For the ten years recorded above the mean death rate was 0.04; for the eight years recorded above the mean annual morbidity was 3.51; the mean annual fatality, 1.29.

Death Rate per 1000 Living.

Disease.	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902
Cancer	0.60	0.59	0.77	0.68	0.54	0.82	0.56	0.75	0.97	0.82
Diarrhœal diseases	1.64	2.14	1.69	2.41	2.21	2.00	1.35	1.51	0.97	0.99
Phthisis.....	2.76	2.08	2.22	2.28	2.29	2.24	1.85	2.25	1.99	1.91
Whooping-cough...	0.20	0.43	0.13	0.21	0.19	0.25	0.31	0.13	0.11	0.09
Bronchitis	0.85	0.65	0.50	0.70	0.62	0.52	0.56	0.52	0.37	0.40
Pneumonia.....	2.06	1.41	1.40	1.91	1.20	1.66	1.81	1.65	1.84	1.70

The mean annual death rate for the ten years recorded above was of cancer, 0.71; of diarrhœal diseases, 1.69; of phthisis, 2.18; of whooping cough, 0.20; of bronchitis, 0.56; of pneumonia, 1.66.

SMALL-POX.

CASES REPORTED FROM OCTOBER 26, 1901 TO DECEMBER 31, 1902.

Ward.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
1.....	0	0	1	2	1	0	0	2	0	1	0	0	0	0	0	7
2.....	0	1	3	4	11	12	0	8	42	13	1	0	1	0	0	96
3.....	0	1	3	4	9	1	0	0	0	1	0	0	2	2	1	24
4.....	1	0	0	2	1	2	2	2	9	2	0	0	1	1	4	27
5.....	0	2	3	0	1	1	3	2	0	19	6	1	0	0	0	38
Total ..	1	4	10	12	23	16	5	14	51	36	7	1	4	3	5	192

The recent epidemic outbreak of small-pox is the first that has occurred in this City since that of 1872 and 1873, in which years there were 33 and 31 deaths respectively.

The morbidity per 1000 persons living for the City, and the several wards was as follows: —

The City	1.99
Ward 1	0.30
" 2	3.42
" 3	1.68
" 4	1.22
" 5	2.69

Males constituted 54.68 per cent. of the cases, and females 45.32 per cent. Of the population of the City males constituted 48.40 per cent. and females 51.60 per cent.

The house distribution of cases was as follows: —

In each of three houses there were five cases; in each of two houses four cases; in each of eight houses three cases; in each of twenty-one houses two cases; in each of 103 houses there was one case.

In no instance did a longer time elapse between a secondary case and exposure to a previous case in the same house than the ordinary incubation period of the disease.

Weekly Return of Cases and Deaths.

Week ending	Cases.	Deaths.	Week ending	Cases.	Deaths.
Oct. 26, '01	1	0	Jan 4, '02	2	1
Nov. 2, '01	0	0	" 11, '02	3	0
" 9, '01	0	0	" 18, '02	0	0
" 16, '01	0	0	" 25, '02	3	1
" 23, '01	3	0	Feb. 1, '02	5	0
" 30, '01	1	1	" 8, '02	4	1
Dec. 7, '01	5	2	" 15, '02	5	0
" 14, '01	1	0	" 22, '02	4	0
" 21, '01	3	0	Mar. 1, '02	9	0
" 28, '01	1	0	" 8, '02	4	1

Weekly Return of Cases and Deaths — Continued.

Week ending	Cases.	Deaths.	Week ending	Cases.	Deaths.
Mar. 15, '02	5	0	Aug. 16, '02	0	2
" 22, '02	2	1	" 23, '02	0	0
" 29, '02	3	1	" 30, '02	0	0
April 5, '02	3	1	Sept. 6, '02	1	0
" 12, '02	2	0	" 13, '02	0	0
" 19, '02	0	0	" 20, '02	0	1
" 26, '02	2	0	" 27, '02	0	0
May 3, '02	1	0	Oct. 4, '02	1	0
" 10, '02	2	0	" 11, '02	0	0
" 17, '02	2	0	" 18, '02	0	0
" 24, '02	4	0	" 25, '02	2	0
" 31, '02	5	0	Nov. 1, '02	1	0
June 7, '02	3	1	" 8, '02	1	0
" 14, '02	0	0	" 15, '02	1	1
" 21, '02	41	1	" 22, '02	0	0
" 28, '02	7	6	" 29, '02	1	0
July 5, '02	6	2	Dec. 6, '02	0	0
" 12, '02	13	2	" 13, '02	0	0
" 19, '02	7	3	" 20, '02	0	0
" 26, '02	6	2	" 27, '02	0	0
Aug. 2, '02	6	3	Through Dec. 31, '02	5	0
" 9, '02	5	1			

Of the reported cases 187 were removed to the quarters provided for them on New Street. Of the remaining cases, one died in the Cambridge Hospital, three died at home, and one was discovered, owing to the occurrence of a secondary case in the same family, after complete recovery.

STAY IN HOSPITAL OF EACH CASE, AND OF ALL CASES OF THE VACCINATED AND UNVACCINATED RESPECTIVELY.

VACCINATED.

Days.	Recovered.	Died.	Total Days.
1	1	0	1
3	0	1	3
5	1	0	5
6	3	0	18
7	2	1	21
8	3	0	24
9	3	1	36
10	4	0	40
11	3	1	44
12	5	2	84
13	4	0	52
15	3	0	45
16	5	0	80
17	6	0	102
18	1	0	18
19	1	0	19
20	1	0	20
21	1	0	21
22	3	0	66
23	2	0	46
24	2	0	48
25	1	0	25

VACCINATED — Continued.

Days.	Recovered.	Died.	Total Days.
27	3	0	81
28	2	0	56
30	2	0	60
31	1	0	31
33	2	0	66
36	1	0	36
37	3	0	111
41	1	0	41
44	1	0	44
45	1	0	45
49	1	0	49
52	2	0	104
Total days			1,552

UNVACCINATED.

Days.	Recovered.	Died.	Total Days.
1	1	0	1
3	0	2	6
4	0	2	8
5	1	2	15
6	1	0	6
7	1	3	28
8	1	1	16
9	0	2	18
10	0	4	40
11	2	3	55
12	4	1	60
13	1	1	26
14	4	0	56
15	1	1	30
16	1	1	32
17	2	0	34
18	1	0	18
19	4	1	95
20	1	0	20
23	1	1	46
24	2	0	48
25	1	0	25
26	4	0	104
27	10	0	270
28	4	0	112
29	2	0	58
31	2	0	62
32	3	0	96
33	1	0	33
35	1	0	35
36	2	0	72
38	3	0	114
39	1	0	39
40	3	0	120
41	3	0	123
47	1	0	47
49	1	0	49
51	1	0	51
54	1	0	54
55	1	0	55
58	1	0	58
72	1	0	72
Total days			2,307

There were on December 31, five cases remaining in the hospital The cases discharged well after a few days stay in hospital were persons who had passed through most of the illness before they were discovered.

Of the cases tabulated 83 had been vaccinated, of whom 76 recovered, and 7 died. Of the cases ending in death 1 aged 41 years had been vaccinated 8 years before; 4 aged respectively 19, 31, 62, and 76 years in infancy, and 2 aged respectively 40 and 50 years in childhood.

Of those who recovered 1 aged 17 years had been vaccinated 5 years before; 1 aged 48 years 27 years before; 1 aged 84 years 75 years before; 1 aged 19 years in infancy; between 20 and 30 years of age, 9 in infancy and 13 in childhood; between 30 and 40, 13 in infancy, 15 in childhood; between 40 and 50, 5 in infancy, 9 in childhood; between 50 and 60 1 in infancy, 2 in childhood; between 60 and 70, 2 in infancy, 3 in childhood.

There were 10 hæmorrahagic cases, 3 of the primary form, where the hæmorrhages precede the characteristic eruption, and 7 of the secondary form, where the hæmorrhages are subsequent to the eruption. All, except one secondary case, died. Of these 10 cases 3 had been vaccinated, 2 males and 1 female, aged respectively 41, 23, and 50 years. The male, who died, had been vaccinated 8 years before, and the female, who died, in childhood. The male aged 23 years, who recovered, in infancy.

There were 6 pregnant women, 3 vaccinated, and 3 unvaccinated. Of the vaccinated 2 aborted, and 1 did not. They were aged respectively 17, 24 and 36 years, and had been vaccinated 5, 19 and 18 years previously. They all recovered. Of the 3 unvaccinated all aborted, and 1, having the secondary hæmorrhagic form of the disease, died.

In the following table are given 187 cases, vaccinated and unvaccinated, at all ages, and in certain age groups, for males (M), females (F), and all persons (P), with the termination of the disease, and also the fatalities for the same entries.

VACCINATED.								UNVACCINATED.							All Cases.	VACCINATED.			UNVACCINATED.			ALL CASES.		
RECOVERED.				DIED.				RECOVERED			DIED.					FATALITY PER CENTUM			FATALITY PER CENTUM			FATALITY PER CENTUM		
Age.	M	F	P	M	F	P	Total	M	F	P	M	F	P	Total		M	F	P	M	F	P	M	F	P
All Ages.	41	35	76	3	4	7	83	39	37	76	19	9	28	104	187	6.81	10.25	8.43	32.75	19.56	26.92	21.56	15.29	18.60
0-1	....	....	....	....	....	....	.....	3	5	8	1	1	2	10	10	.....	.....	.....	25.	16.66	20.	25.	16.66	20.
1-2	....	....	....	....	....	....	.....	1	1	2	....	1	1	3	3	.....	.....	.....	.....	50.	33.33	.....	50.	33.33
2-3	....	....	....	....	....	....	.....	....	5	5	....	....	....	5	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
3-4	....	....	....	....	....	....	.....	....	2	2	....	....	....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
4-5	....	....	....	....	....	....	.....	....	3	3	1	....	1	4	4	.....	.....	.....	100.	.....	25.	100.	.....	25.
5-10	....	....	....	....	....	....	.....	8	3	11	....	....	....	11	11	.....	.....	.....	.....	.....	.....	.....	.....	.....
10-15	....	....	....	....	....	....	.....	2	4	6	....	....	....	6	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
15-20	1	1	2	....	1	1	3	6	1	7	....	2	2	9	12	.....	50.	33.33	.....	66.66	22.22	.....	60.	25.
20-30	12	10	22	....	....	....	22	11	7	18	7	....	7	25	47	.....	.....	.....	38.88	.....	28.	23.33	.....	14.89
30-40	15	12	27	....	1	1	28	6	3	9	5	2	7	16	44	.....	7.69	3.57	45.45	40.	43.75	19.23	16.66	18.18
40-50	10	6	16	2	....	2	18	2	1	3	4	2	6	9	27	16.66	.....	11.11	66.66	66.66	66.66	33.33	22.22	29.62
50-60	2	1	3	....	1	1	4	....	2	2	1	1	2	4	8	.....	50.	25.	100.	33.33	50.	33.33	40.	37.50
60-70	...	5	5	1	....	1	6	....	....	....	...	....	....	.....	6	100.	.....	16.66	....	.....	.....	100.	.. ... .	16.66
70-80	....	....	....	....	1	1	1	....	....	....	....	....	....	.....	1	.....	100.	100.	.....	.....	.....	....	100.	100.
Over 80.	1	....	1	....	....	....	1	....	....	...	....	....	....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....

460

RETURNS OF DEATHS (NON-RESIDENTS OMITTED).

Age and Sex Distribution.

Age.	Males.	Females.	All Persons.
0– 1 Year	173	141	314
1– 2 Years	49	34	83
2– 3 "	7	17	24
3– 4 "	8	12	20
4– 5 "	10	9	19
5–10 "	17	20	37
10–15 "	5	12	17
15–20 "	19	25	44
20–30 "	69	69	138
30–40 "	59	54	113
40–50 "	67	61	128
50–60 "	73	72	145
60–70 "	77	94	171
70–80 "	60	70	130
Over 80 Years	25	46	71
Total	718	736	1,454

Monthly Distribution.

January	111	August	130
February	136	September	123
March	143	October	122
April	119	November	107
May	101	December	129
June	92		
July	141	Total	1,454

CAUSES.

	Males.	Females.	All Persons.
Bronchitis	16	23	39
Pneumonia	89	75	164
Cancer	27	52	79
Cerebro-spinal Meningitis	3	1	4
Cholera Infantum	28	23	51
Diarrhœa and Cholera Morbus	19	20	39
Dysentery	5	1	6
Diphtheria and Croup	18	17	35
Erysipelas	3	2	5
Fever, Scarlet	3	6	9
Fever, Typhoid	14	3	17
Influenza	1	1	2
Measles	3	1	4
Phthisis	75	109	184
Puerperal Septicaemia	0	4	4
Small-pox	19	13	32
Whooping-cough	2	7	9
Diseases of Brain and Spinal Cord	80	84	164
Diseases of Heart	71	67	138
Diseases of Kidney	28	27	55
Accident	40	12	52
Homicide	2	0	2
Suicide	10	2	12
Unknown and ill-defined	46	46	92
All other causes	116	140	256
Total	718	736	1,454
Still Births	66	51	117

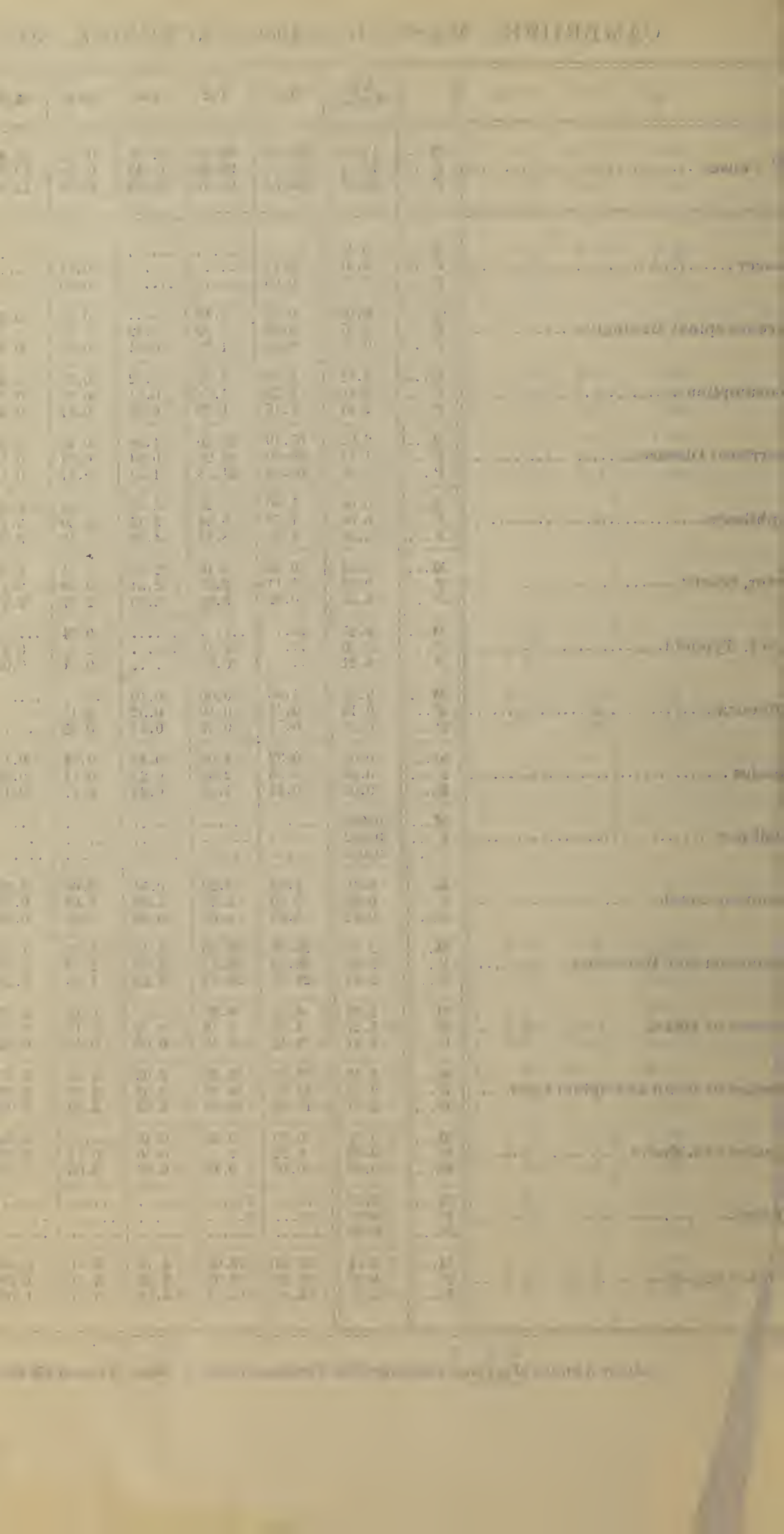
CAMBRIDGE, MASS., 1891–1900, INCLUSIVE, MEAN ANNUAL DEATH RATE PER 1,000 LIVING.

		All Ages.	0-1	1-2	2-3	3-4	4-5	0-5	5-10	10-15	15-20	20-30	30-40	40-50	50-60	60-70	70-80	Over 80
All Causes	M...	18.92	220.39	98.60	21.69	18.54	12.42	73.70	7.15	3.64	4.79	6.85	9.97	13.11	24.55	46.06	95.91	171.42
	F...	18.17	188.39	93.24	18.42	16.08	12.87	63.85	7.89	3.95	6.69	7.48	8.34	12.21	18.64	37.01	77.92	164.76
	P...	18.41	204.53	95.91	20.03	17.28	12.64	68.76	7.52	3.79	5.59	7.17	9.14	12.63	21.52	40.90	84.92	167.14
Cancer	M...	0.40	.....	.....	.....	.....	.....	.....	0.02	.....	.....	0.03	0.20	0.39	1.47	3.62	5.10	2.28
	F...	0.91	0.11	.....	. ....	0.11	.....	0.04	.....	0.06	0.02	0.04	0.40	1.73	3.02	4.52	6.49	6.28
	P...	0.66	0.05	.....	.....	0.05	.....	0 02	0.01	0.03	0.01	0.03	0.30	1.10	2.31	4.13	5.95	4.86
Cerebro-spinal Meningitis	M...	0.08	0.65	1.40	.....	0.48	0.34	0.49	0.11	0 06	0.02	0.07	.....	0.04	.....	.....	.....	.....
	F...	0.07	0.55	0.99	0.42	0.47	.....	0.44	0.10	0.06	0.10	0.04	.....	.....	0.03	.....	... ..	.....
	P...	0.08	0.60	1.19	0.21	0.47	0.17	0.47	0.10	0.06	0.00	0.05	.....	0.02	0.01	.....	.....	.....
Consumption	M...	2.42	1.09	2.00	0.32	0.36	0.34	0.72	0.30	0.57	2.02	3.03	3.50	3.10	3.17	3.41	3.06	2.85
	F...	2.40	1.22	1.78	0.21	0.47	0.36	0.71	0.27	0.83	3.65	4.01	2.90	2.44	1.87	1.64	2.16	0.62
	P...	2.41	1.16	1.89	0.26	0.41	0.35	0.71	0.28	0.72	2.82	3.56	3.27	2.75	2.46	2.40	2.51	1.41
Diarrhœal Diseases	M...	2.02	67.10	23.40	1.08	0.48	0.23	18.53	0.16	0.03	0.10	0.04	0.04	.....	0.48	1.16	2.21	4.57
	F...	1.81	60.60	19.28	0.94	0.34	0.12	16.17	0.21	.....	0.05	0.08	0.11	0.08	0.37	1.07	3.03	6.60
	P...	1.90	63.88	21.33	1.01	0.41	0.17	17.35	0.19	0.01	0.07	0.06	0.08	0.04	0.42	1.11	2.71	5.88
Diphtheria	M...	0.68	1.86	7.20	6.07	5.93	3.60	4.70	2.00	0.39	0.05	0.01	0.01	0.02	.....	.....	.....	.....
	F...	0.66	1.78	9.34	3.15	4.39	3.40	3.93	2.56	0.49	0.02	0.04	0.01	0.04	0.06	.....	0.10	.....
	P...	0.68	1.82	8.27	4.59	5.15	3.50	4.31	2.28	0.45	0.03	0.02	0.01	0.03	0.03	.....	0.06	.....
Fever, Scarlet	M...	0.33	0.54	2.10	2.38	2.54	2.20	2.01	1.23	0.18	0.02	0.02	0.01	.....	.....	.....	.....	.....
	F...	0.32	1.11	3.37	2.31	2.19	2.18	2.13	1.08	0.21	0.05	0.01	0.01	.....	0.03	.....	.....	.....
	P...	0.33	0.82	3.09	2.35	2.37	2.19	2.07	1.15	0.20	0.03	0.01	0.01	.....	0.01	.....	.....	.....
Fever, Typhoid	M...	0.27	.....	.....	. ....	0.24	.....	0.04	0.16	0.12	0.28	0.41	0.57	0.18	0.03	0.13	.....	.....
	F...	0.15	.....	0.19	.....	.....	0.12	0.04	0.02	0.31	0.13	0.24	0.20	0.16	0.03	0.10	.....	.....
	P...	0.21	.....	0.09	.....	0.11	0.05	0.04	0.09	0.21	0.20	0.33	0.38	0.17	0.03	0.11	.....	.....
Influenza	M...	0.16	1.09	0.60	0.10	.....	.....	0.34	0.11	0.06	.... .	0.03	0.06	0.07	0.22	0.68	2.04	5.71
	F...	0.19	0.44	0.19	0.52	0.11	.....	0.27	.....	.....	.....	0.03	0.08	0.06	0.18	1.02	1.94	4.71
	P....	0.18	0.77	0.39	0.32	0.05	.....	0.31	0.05	0.03	.....	0.03	0.07	0.06	0.20	0.88	1.98	5.07
Measles	M...	0.03	0.32	1.00	0.43	0.24	0.11	0.37	0.02	.....	.....	.....	.....	.....	.....	.....	.....	.....
	F...	0.06	0.55	2.38	0.21	0.11	0.24	0.54	0.10	.....	.....	.....	0.01	.....	.....	.....	.. ...	.....
	P....	0.05	0.44	1.69	0.32	0.17	0.17	0.45	0.06	.....	.... .	.....	0.007	.....	.....	.....	.....	.....
Small-pox	M...	0.002	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.02	.....	.....	.....	.....
	F...	0.002	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.02	.....	.....	.....	.....
	P...	0.002	.....	.....	.....	.....	.....	... ..	.....	.....	.....	.....	.....	0.02	.....	.....	.....	.....
Whooping-cough	M...	0.19	4.82	4.20	0.54	0.60	0.23	1.91	0.02	.....	.....	.....	... ..	.....	.....	.....	.....	.....
	F...	0.24	5.80	5.16	1.26	0.69	0.36	2.45	0.10	.....	.....	.....	.....	.....	.....	.....	.....	.....
	P....	0.21	5.30	4.68	0.90	0.65	0.30	2.18	0.06	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pneumonia and Bronchitis	M...	2.40	26.86	20.80	3.47	1.33	1.04	9.97	0.46	0.12	0.41	0.66	1.30	1.68	3.32	5.60	16.15	23.42
	F...	2.28	22.32	19.48	3.26	1.73	1.58	8.59	0.56	0.24	0.48	0.37	0.82	1.27	2.15	6.63	12.98	27.93
	P...	2.34	24.61	20.13	3.38	1.53	1.30	9.40	0.51	0.18	0.44	0.52	1.05	1.46	2.68	6.19	14.21	26.36
Diseases of Heart	M...	1.34	3.82	0.20	.....	0.12	0.11	0.94	0.16	0.61	0.20	0.31	0.49	1.26	3.98	8.20	14.79	20.57
	F...	1.27	3.01	0.19	0.10	0.11	0.36	0.80	0.27	0.40	0.48	0.38	0.59	1.39	2.52	4.88	10.94	13.83
	P....	1.31	3.42	0.19	0.05	0.11	0.23	0.88	0.21	0.50	0.33	0.35	0.54	1.33	3.19	6.30	12.43	16.22
Diseases of Brain and Spinal Cord	M...	2.19	19.62	15.00	3.03	2.66	1.97	7.98	0.57	0.24	0.17	0.37	0.71	1.61	3.21	8.47	20.25	25.71
	F...	2.15	14.39	16.89	3.05	1.96	2.06	6.86	1.18	0.24	0.40	0.16	0.38	1.37	2.77	6.63	16.55	26.72
	P...	2.17	17.03	15.95	3.04	3.30	2.01	7.42	0.85	0.24	0.28	0.27	0.54	1.48	2.97	7.42	17.98	26.36
Diseases of Kidneys	M...	0.74	0.10	0.40	0.43	.....	0.34	0.24	0.05	0.09	0.25	0.22	0.59	0.74	2.32	4.78	6.29	6.28
	F...	0.63	0.22	.....	0.10	0.11	0.36	0.17	0.10	0.15	0.26	0.31	0.53	1.08	1.40	1.94	3.24	3.14
	P....	0.68	0.16	0.19	0.26	0.05	0.35	0.21	0.08	0.12	0.26	0.26	0.56	0.92	1.82	3.16	4.43	4.25
Suicide	M...	0.13	.....	.....	.....	.....	.....	.....	.....	.....	0.05	0.13	0.23	0.28	0.22	0.34	.....	0.57
	F...	0.02	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.02	0.05	0.04	0.06	0.05	0.10	.....
	P....	0.08	.....	.....	.....	.....	.....	.....	.....	.....	0.02	0.07	0.14	0.15	0.13	0.17	0.06	0.20
All other causes	M...	5.44	92.43	19.60	3.79	3.51	1.85	25.39	1.76	1.07	1.17	1.39	2.05	3.66	6.09	9.64	26.02	79.42
	F...	4.95	76.22	13.91	2.84	3.24	1.70	20.36	1.27	0.93	1.01	1.72	2.16	2.48	4.11	8.48	20.34	74.82
	P....	5.19	84.40	16.74	3.31	3.37	1.78	22.87	1.51	1.02	1.09	1.55	2.11	3.04	5.02	8.97	22.55	76.47

Mean Annual Marriage Rate per 1,000 Persons, 11.05.

Mean Annual Birth Rate per 1,000 Persons: M = 29.74, F = 27.16, P = 28.42

Still-births per 100 births: M = 5.16, F = 3.59, P = 4.39



A REVIEW OF THE DEATH RATES FROM CERTAIN DISEASES FOR THE TEN YEARS, 1891–1900.

The following table gives the death rates of all persons (P), and also of Males (M) and Females (F) respectively, at all ages and at certain age periods, for all causes, and for certain diseases and groups of diseases.

It also gives the marriage rate; and likewise the birth rates for M, F, and P; and the proportion of still-births of M, F, and P.

The marriage rate is calculated from the number of marriages, not of persons married.

The birth rate is calculated from all the births occurring in Cambridge, irrespective of the legal residence of the parent or parents.

The death rates given in the following table, and in the tables published in the report for 1898, are the crude, or actual death rates, and while they may be compared with each other, they are but approximately comparable with the death rates of other places.

Erratum. In table 1 published in the annual report of this Board for the year 1898, the death rate for all persons (P) from Consumption at the age period 10–15 years should read 0.70 instead of 0.17.

EDWIN FARNHAM, M. D.,
Medical Inspector and Physician to the Board.

REPORT OF THE BOARD OF SURVEY

City of Cambridge, December 15, 1902.

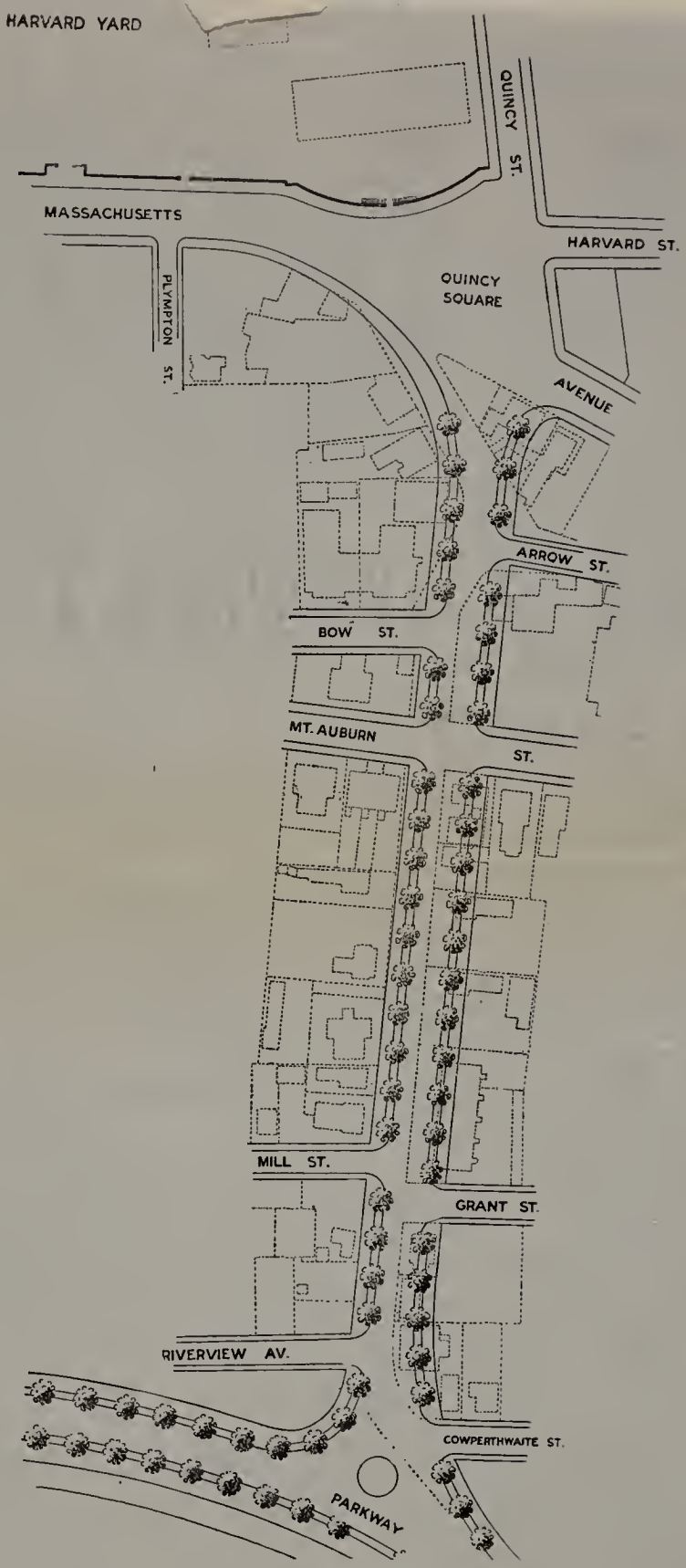
To the Honorable City Council: —

In accordance with the requirements of the City Ordinances, the second annual report of this Board is herewith submitted.

At the beginning of the year, William E. Doyle, Esq., was reappointed by His Honor the Mayor, as a member of the Board, for the term of three years from January 1, 1902.

The subject of the proposed widening and laying out of De Wolf and Bow Streets, from Quincy Square to the Charles River Parkway, has largely occupied the attention of the Board, during the entire year. This question came before the Board upon a petition signed by the "University Associates Trustees," Alfred Bowditch, Edmund M. Parker, Harold J. Coolidge, and Harvard College by C. F. Adams, 2nd, Treasurer, Richard H. Dana and Charles W. Eliot, requesting "the Board of Survey of the City of Cambridge to consider the advisability of a widening and relocation of De Wolf and Bow Streets between the Charles River Parkway and Quincy Square, with a view to providing a dignified and suitable roadway between these two points," and further requesting "that the Board shall cause to be made under their direction such plans for this purpose as they may deem necessary; and shall give public hearings thereon, as provided for in Section 3, Chapter 405 of the Acts of 1900, and shall thereafter approve, sign, mark, file and attest said plans as provided for in said Act." Pursuant to notice duly given under the provisions of the statute before mentioned, a preliminary hearing was given upon the matter of the proposed widening and relocation, on January 10th last. The case of the petitioners was conducted by Gen. Edgar R. Champlin, who presented at length their reasons for urging the City to lay out the two streets in the manner proposed, assuming the probable net cost to be $100,000.00.

At the request of General Champlin, the accompanying plan of the proposed improvement, was submitted and explained by F. L. Olmstead, Jr., Landscape Architect.


HARVARD YARD
QUINCY ST.
MASSACHUSETTS
HARVARD ST.
PLYMPTON ST.
QUINCY SQUARE
AVENUE
ARROW ST.
BOW ST.
MT. AUBURN ST.
MILL ST.
GRANT ST.
RIVERVIEW AV.
COWPERTHWAITE ST.
PARKWAY

This plan was furthur advocated by President Eliot, Watson G. Cutter, Theodore H. Raymond, Henry M. Williams and Edmund M Parker. Other gentlemen present vigorously remonstrated against the proposed improvement, among whom was James R. Murphy, who appeared for St. Paul's Catholic School Association, Charles H. Thurston, William B. Durant, attorney for residents of De Wolf Street, Rev. William Orr and Rev. J. J. Ryan of St. Paul's Church, George G. Wright, John H. Corcoran, Albert A. Spencer and John F. O'Brien. The matter was again considered at a meeting on February 3, at which two plans prepared by the City Engineer, were considered.

Plan No. 1 showing a street 80 feet wide, estimated cost, $193,534.44.

Plan No. 2 showing a street 70 feet wide, estimated cost, $154,167.83

On the 19th of February another legal hearing was given, this being upon the two plans last mentioned. The petitioners appeared and were again met by the opposition of the St. Paul's Catholic Association, reinforced by additional owners and tax payers. The matter was again considered at meetings of the Board, held April 4, May 2 and May 26. respectively, the same parties appearing for and against the petition, At the conclusion of the hearing on the date last mentioned, the question was laid on the table and has not since been considered.

Another matter of considerable importance, it being a proposed change of the lines of Princeton Avenue, so called, was brought before the Board upon numerous petitions of H. O. Marcy and others. These petitions ask that Princeton avenue be extended at the width of 100 feet to Main Street. It will be observed by reference to the first annual report of this Board, made in December last, that in the year 1901, the Board approved the lay out of certain streets in the territory bounded northerly by Main Street, southeasterly by the Esplanade, northwesterly by the Boston and Albany Railroad and westerly by Massachusetts Avenue. Included in this lay out was Princeton Avenue, so-called, a proposed highway extending at the width of 100 feet from the Esplanade across Massachusetts Avenue to Ames Street so-called. The petitioners ask for a change in this lay out, so that the proposed avenue shall extend from Ames Street across four intersecting streets to Main Street, coming out at a point about opposite Third Street at Kendall Square. A hearing upon this petition was given November 3d, and again on December 3d. As the approval by this Board of the proposed lines of the extension would possibly cause legal complications, the Board has deferred final action upon this matter. For a clearer understanding as to the proposition of the petitioners, reference may be had to a plan entitled "Plan showing lands adjacent to the Charles River Parkway, between Main Street and Brookline Street, with existing and suggested system of streets," drawn

by L. M. Hastings, City Engineer, and on file in his office. The red lines drawn upon this plan indicate the proposed extension of Princeton Avenue.

Besides the consideration of the questions before mentioned, the Board has considered and approved locations for streets and sewers as follows:—

Street Locations, etc., approved by the Board of Survey in 1902.

Name.	From	To	Approved.
Brookline street, widening..	Rangeway	Brookline bridge.....	Feb. 25
Laurel street, widening.....	River street	Pleasant street.....	May 5
Warland street, extension..	River street.....	Pleasant street.....	May 5
Blanche street, laying out ..	Massachusetts avenue	Auburn street.....	May 5
Line street, laying out.....	Kirkland street	Cambridge street.....	Nov. 19
Clifton street, laying out ...	Harvey street	Dudley street	Dec. 3
Dudley street, laying out...	Clifton street.....	Montgomery street.....	Dec. 3
Royal avenue, laying out....	Huron avenue	Concord avenue.....	Dec. 3

Sewer Locations Approved by the Board of Survey in 1902.

Name.	From	To	Approved.
Everett street	Irving street.....	Francis avenue	May 3
Francis avenue	Existing sewer.....	Everett street	May 3
Royal avenue.....	Huron avenue.....	Concord avenue	May 3
Greenhalge street.....	Esplanade (across)	Amherst street..... ...	Nov. 19
Robinson street.....	Esplanade (across)	Amherst street.....	Nov. 19
Chestnut street.....	Sidney street.....	Waverly street.....	Nov. 19
Rogers street...	Third street.....	Second street.....	Nov. 19
Henderson court.....	Day street.....	Southerly 265 feet...	Dec. 3

The Board has also considered a petition for the acceptance of Winthrop Street between Boylston Street and Eliot Square, as shown upon a plan of the proposed widening and laying out of said street dated October 1881. The plan shows a width of 30 feet for a distance of 75 feet westerly from Boylston Street, the remainder of the street a distance of about 200 feet to Eliot Square is 20 feet in width. After careful deliberation upon this matter, it was deemed inexpedient to approve the lay out of a street of such irregular width and the plan has therefore been formally disapproved by the Board.

Hearings have been given upon other proposed street locations as follows: —

Acacia Street, extension from Ash Street through Ash Street Place, and a private passageway to Hilliard Street. This was upon the petition made direct to the Board, the petitioners furnishing a plan. All parties

were notified of this hearing and a full expression of opinion was obtained upon the subject. A plan was subsequently prepared by the City Engineer, at the request of the Board, showing a width of thirty feet for the proposed extension, and this appeared to be satisfactory to the petitioners and others interested. The latter plan received the informal approval of the Board, but inasmuch as the hearing was not advertised as required by law, further formal action will be necessary in the matter.

A petition for the widening and acceptance of Brown Street, between Brattle Street and Foster Street, came before the Board, upon reference by the City Council. A duly notified hearing was given upon a plan of this street prepared by the City Engineer, and showing a width of thirty-five feet. Considerable opposition was developed at the hearing, and the Board reserved its decision thereon.

Following is a list of all matters in the files of the Board up to the time of the preparation of this report, action upon which, for various reasons has been delayed, viz: —

1. Petition of "The University Associates Trustees," relative to the widening of De Wolf and Bow Streets.
2. Petition of H. O. Marcy and others for the extension of Princeton Avenue to Main Street.
3. Petition for extension and laying out of Acacia Street.
4. Petition for the widening and laying out of Brown Street.
5. Order as to the advisability of laying out Railroad Street.
6. Order relative to changing the lines of approach from First Street to Main Street.
7. Petitions for the laying out of portions of Greenhalge and Robinson Streets.

The first two matters enumerated in the foregoing list have already been mentioned at length in this report. These were originally brought to the Board, never having been before the City Council.

The remaining matters enumerated in the foregoing list, came to the Board on reference by the City Council, and action has been delayed thereon for various reasons.

The preceding pages embrace a review of the work carried on by the Board during the past year. In all its deliberations, and in its conclusions upon the important matters brought before it, the Board has sought to act with a view always to the welfare of our City.

JAMES A. WOOD,
EDWIN D. MELLEN,
WILLIAM E. DOYLE,
Board of Survey.

APPENDIX

ORDINANCES

PASSED BETWEEN MARCH 28, 1902, AND JUNE 1, 1903.

An Ordinance in Amendment of an Ordinance Entitled "Duties and Salaries."

Be it ordained by the City Council of the City of Cambridge, as follows: —

Section 30, of Chapter 28, of the Revised Ordinances of 1892, as amended to November 8, 1899, is hereby amended in the line relating to the salary of the City Messenger, by striking out the figures $1,800.00 and substituting in place thereof the figures $1,000.00. [*Approved May* 1, 1902.

An Ordinance in Relation to Invalid Tax Deeds.

Be it ordained by the City Council of the City of Cambridge, as follows: —

Whenever it shall appear to the City Treasurer that an invalid tax deed has been given by the Collector of Taxes for an estate sold at a tax sale, the City Treasurer shall charge the cost of calling in such invalid tax deed to the appropriation for "Abatements." [*Approved June* 12 1902.

An Ordinance in Amendment of an Ordinance Entitled "City Scales and Weighers."

Be it ordained by the City Council of the City of Cambridge, as follows: —

Section 4, of Chapter 32, of the Revised Ordinances of 1892, as amended to November 8, 1899, is hereby amended by striking out the entire section and inserting in place thereof the following: —

Sect. 4. — The fees for weighing to be received by the weighers, which they shall pay to the treasurer quarterly, shall be as follows, to wit: — One-half of a cent for every hundred pounds of coal, pig iron, stone, sand, produce, provisions or ice, and one cent for every hundred pounds of hay, straw or other articles, provided however, that the fees for weighing any article other than hay or straw shall never be less than ten cents; and no single fee shall exceed one dollar in amount.

The vehicle containing the same, and other tare, shall be weighed without charge, and no fees shall be taken for weighing done on account of the City. [*Approved July* 3, 1902.

AN ORDINANCE IN AMENDMENT OF AN ORDINANCE ENTITLED "CONSTRUCTION, MAINTENANCE AND INSPECTION OF BUILDINGS."

Be it ordained by the City Council of the City of Cambridge, as follows: —

Section 62, of Chapter 13, of the Revised Ordinances as amended to November 8, 1899, is hereby further amended by inserting after the word "buildings," in the fifth line, "except schoolhouses," and by inserting after the word "pounds" in the fifth line the words "for floors of schoolhouses, other than the floors of assembly rooms and corridors, eighty pounds; and for floors of assembly rooms and corridors, one hundred and fifty pounds.

As amended the section will read as follows: —

SECTION 62. — All floors shall be constructed to bear a safe weight per superficial foot, exclusive of materials, as follows: For dwellings, tenements, or lodging houses, seventy-five pounds; for stores and office buildings for light mechanical purposes and for public buildings, except school houses, one hundred and fifty pounds; for floors of school houses other than the floors of assembly rooms and corridors, eighty pounds; and for the floors of assembly rooms and corridors, one hundred and fifty pounds; for storehouses, warehouses, machine shops, armories, drill rooms and riding schools, not less than two hundred and fifty pounds. The requirements shall apply to all buildings altered as well as to new buildings. [*Approved July* 3, 1902.

AN ORDINANCE IN AMENDMENT OF AN ORDINANCE ENTITLED "GENERAL REGULATIONS FOR STREETS, COMMONS, RESERVOIRS, AND OTHER PUBLIC PLACES."

Be it ordained by the City Council of the City of Cambridge, as follows: —

Chapter 45, of the Revised Ordinances of 1892, as amended to November 8, 1899, is hereby amended by adding the following new section, viz: —

SECTION 51. — No person shall ride or propel or cause to be propelled, vehicles other than those propelled or drawn by horses or persons, upon the driveway of Fresh Pond at a rate of speed exceeding ten miles an hour. Any person violating the provisions of this section shall be liable to a penalty for each offence of not more than two hundred dollars, or of imprisonment for a term not exceeding ten days, or of both such fine and imprisonment. [*Approved July* 3, 1902.

AN ORDINANCE IN AMENDMENT OF AN ORDINANCE ENTITLED "STREET"

Be it ordained by the City Council of the City of Cambridge, as follows —

SECTION 10, of Chapter 25, of the Revised Ordinances of 1892, as amended to November 8, 1899, is hereby amended by adding thereto the

following: — "No gas pipe, water pipe, sewer, conduit, street railway track, pole, nor any other structure, except wires, shall be placed beneath, upon or above any public street or way, except upon a location and at a grade approved by the City Engineer, or authorized by the Board of Aldermen.

Within sixty days after the completion of the work so approved or authorized, a final plan showing accurately in detail the lines, grades and construction of the work as finished, shall be filed in the office of the City Engineer. If required by the City Engineer a preliminary plan showing the proposed location and grade of the structure shall first be filed in his office."

Any person violating the foregoing provision shall be subject to a penalty of twenty dollars for each offence and shall remove any structure placed contrary to the provisions of this section if required so to do by the City Engineer, and upon failure so to do the City Engineer may make such removal or change, and the cost thereof shall be paid to the City by the person or department owning or controlling the structure.

[*Approved July* 22, 1902.

AN ORDINANCE IN AMENDMENT OF AN ORDINANCE ENTITLED "GENERAL REGULATIONS FOR STREETS, COMMONS, RESERVOIRS AND OTHER PUBLIC PLACES."

Be it ordained by the City Council of the City of Cambridge, as follows:—

Section 26, of Chapter 45, of the Revised Ordinances of 1892, as amended to November 8, 1899, is hereby amended by adding at the end thereof the following:—

"No person shall carry or cause to be carried on any vehicle in any street, a load the weight whereof exceeds fifteen net tons, without the written permission of the Superintendent of Streets." [*Approved Nov.* 14, 1902.

AN ORDINANCE IN AMENDMENT OF AN ORDINANCE ENTITLED "DUTIES AND SALARIES."

Be it ordained by the City Council of the City of Cambridge, as follows:—

Section 30, of Chapter 28, of the Revised Ordinances of 1892, as amended to November 8, 1899, is hereby amended in the ninth line, relating to the City Auditor, by striking out the figures $2,100.00 and inserting in place thereof the figures "$2,500.00."

As amended this line will read as follows:

City Auditor.....$2,500.00

[*Approved Dec.* 31, 1902.

AN ORDINANCE IN AMENDMENT OF AN ORDINANCE ENTITLED "WATER WORKS."

Be it ordained by the City Council of the City of Cambridge, as follows: —

Section 24, of Chapter 27, of the Revised Ordinances of 1892, as amended to November 8, 1899, and is further amended by an ordinance approved June 6, 1901, is hereby further amended by striking out the following clause in relation to the annual charge for rent of water meters, viz: —

"In addition to the charge for water used, an annual rental of two dollars for each meter shall be assessed commencing April 1, 1898."

This ordinance shall take effect on the first day of April, 1903.

[*Approved January* 3, 1903.

MAYORS OF THE CITY OF CAMBRIDGE.

(From 1846 to 1903 Inclusive.)

James D. Green	From May,	1846,	to April,	1848
Sidney Willard	" April,	1848,	to April,	1851
George Stevens	" April,	1851,	to April,	1853
James D. Green	" April,	1853,	to April,	1854
*Abraham Edwards	" April,	1854,	to January,	1855
Zebina L. Raymond	" January,	1855,	to January,	1856
John Sargent	" January,	1856,	to January,	1860
†James D. Green	" January,	1860,	to July 24,	1861
‡Charles Theo. Russell	" July 31,	1861,	to January,	1863
George C. Richardson	" January,	1863,	to January,	1864
Zebina L. Raymond	" January,	1864,	to January,	1865
J. Warren Merrill	" January,	1865,	to January,	1867
Ezra Parmenter	" January,	1867,	to January,	1868
Charles H. Saunders	" January,	1868,	to January,	1870
Hamlin R. Harding	" January,	1870,	to January,	1872
Henry O. Houghton	" January,	1872,	to January,	1873
Isaac Bradford	" January,	1873,	to January,	1877
Frank A. Allen	" January,	1877,	to January,	1878
Samuel L. Montague	" January,	1878,	to January,	1880
James M. W. Hall	" January,	1880,	to January,	1881
James A. Fox	" January,	1881,	to January,	1885
William E. Russell	" January,	1885,	to January,	1889
Henry H. Gilmore	" January,	1889,	to January,	1891
Alpheus B. Alger	" January,	1891,	to January,	1893
William A. Bancroft	" January,	1893,	to January,	1897
Alvin F. Sortwell	" January,	1897,	to January,	1899
Edgar R. Champlin	" January,	1899,	to January,	1901
David T. Dickinson	" January,	1901,	to January,	1902
John H. H. McNamee	" January,	1902.	Now in office.	

*Municipal year changed. †Resigned. ‡First elected by the City Council.

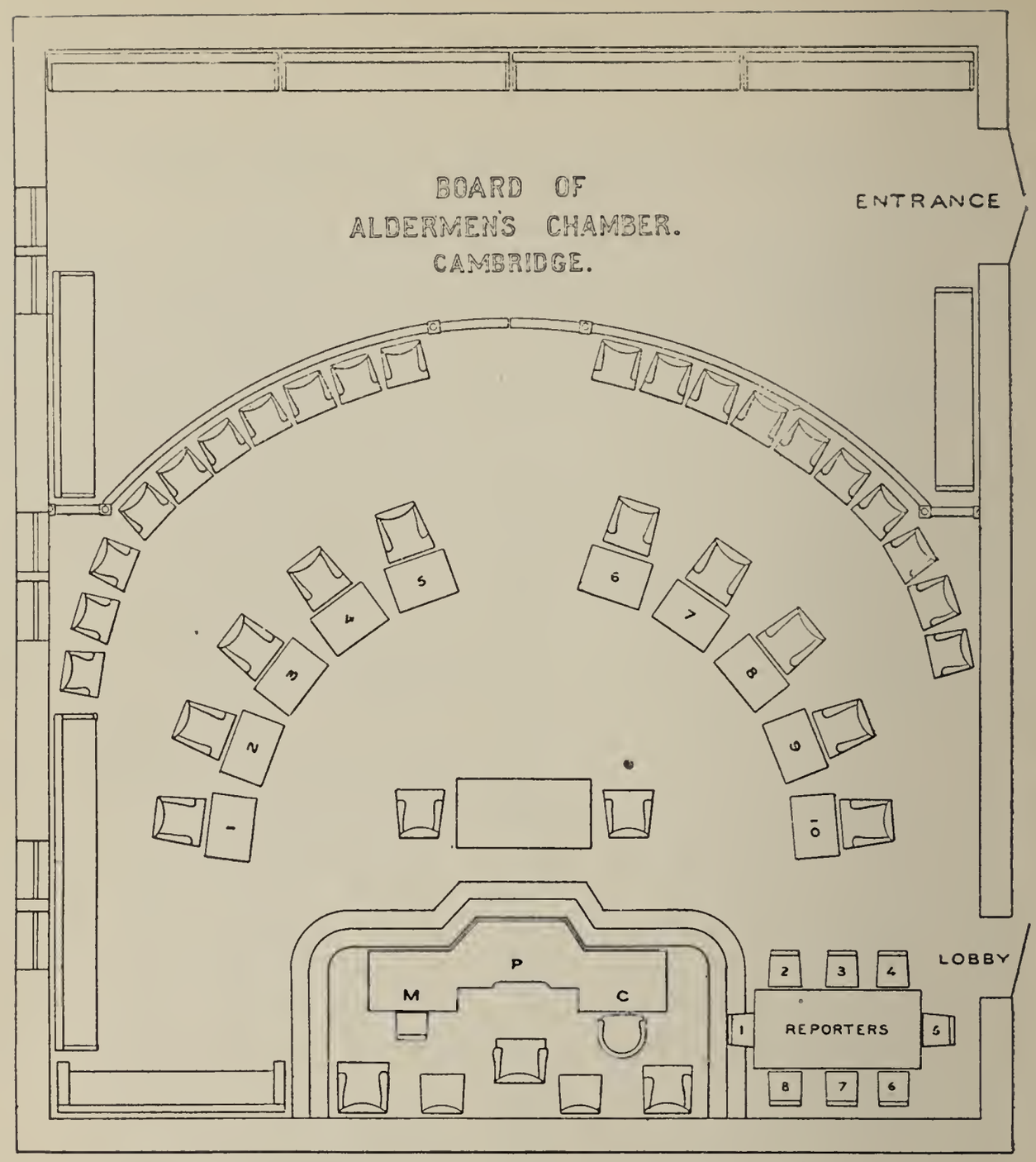
PRESIDENTS OF THE BOARD OF ALDERMEN.

1888	Edward W. Hincks.	1897	Russell Bradford.
1889	John H. Corcoran.	1898	Russell Bradford.
1890	Alvin F. Sortwell.	1899	Walter C. Wardwell.
1891	William A. Bancroft.	1900	Walter C. Wardwell.
1892	William A. Bancroft.	1901	George E. Saunders.
1893	John R. Fairbairn.	1902	James F. Aylward.
1894	John G. Thorogood.	1903	*John W. Coveney.
1895	John R. Fairbairn.		Timothy W. Good.
1896	John R. Fairbairn.		

* John W. Coveney resigned March 10, 1903, and Timothy W. Good elected to the vacancy.

PRESIDENTS OF THE COMMON COUNCIL.

1846 Isaac Livermore.
1847 John Sargent.
1848 John C. Dodge.
1849 Samuel P. Heywood.
1850 Samuel P. Heywood.
1851 John S. Ladd.
1852 John Sargent.
1853 John Sargent.
1854 John C. Dodge.
1855 Alanson Bigelow.
1856 Ezra Ripley. Resigned January 31.
1856 George S. Saunders. Elected January 31.
1857 George S. Saundebs.
1858 James C. Fisk.
1859 James C. Fisk.
1860 Hamlin R. Harding.
1861 Hamlin R. Harding.
1862 Jared Shepard. Resigned September 17.
1862 Knowlton S. Chaffee. Elected September 24.
1863 George S. Saunders.
1864 George S. Saunders.
1865 John S. March.
1866 John S. March.
1867 Marshall T. Bigelow.
1868 Knowlton S. Chaffee. Resigned February 4.
1868 Henry W. Muzzey. Elected February 4.
1869 Henry W. Muzzey.
1870 Joseph H. Converse.
1871 Joseph H. Converse.
1872 Alvaro Blodgett.
1873 Alvaro Blodgett. Resigned June 17.
1873 Francis H. Whitman. Elected June 17.
1874 George F. Piper.
1875 George F. Piper.
1876 Frank A. Allen.
1877 Perez G. Porter.
1878 George S. Saunders.
1879 George S. Saunders.
1880 Charles Walker.
1881 Charles Walker.
1882 George H. Howard.
1883 George H. Howard.
1884 George H. Howard.
1885 Cornelius G. H. Bennink.
1886 John H. Corcoran.
1887 John H. Corcoran.
1888 Alvin F. Sortwell.
1889 Edward A. Bingham.
1890 Edward A. Bingham.
1891 Edward C. Wheeler.
1892 Herbert A. Chase.
1893 J. Henry Russell.
1894 Charles M. Conant.
1895 John L. Odiorne.
1896 John L. Odiorne.
1897 Albert S. Apsey.
1898 George E. Saunders.
1899 William F. Brooks.
1900 John D. Merrill.
1901 John D. Merrill.
1902 Thorndike Spalding.
1903 Edward E. Clark.



KEY TO BOARD OF ALDERMEN'S CHAMBER

CAMBRIDGE, 1903

P— { John W. Coveney, / Timothy W. Good, } *President.**

1	Alderman	Barry.	6	Alderman	Carstein.
2	"	Flynn.	7	"	Harrington.
3	"	Authier.	8	"	Barrett.
4	"	Bell.	9	"	Davis.
*5	"	{ Good. / Coveney.	10	"	Doherty.

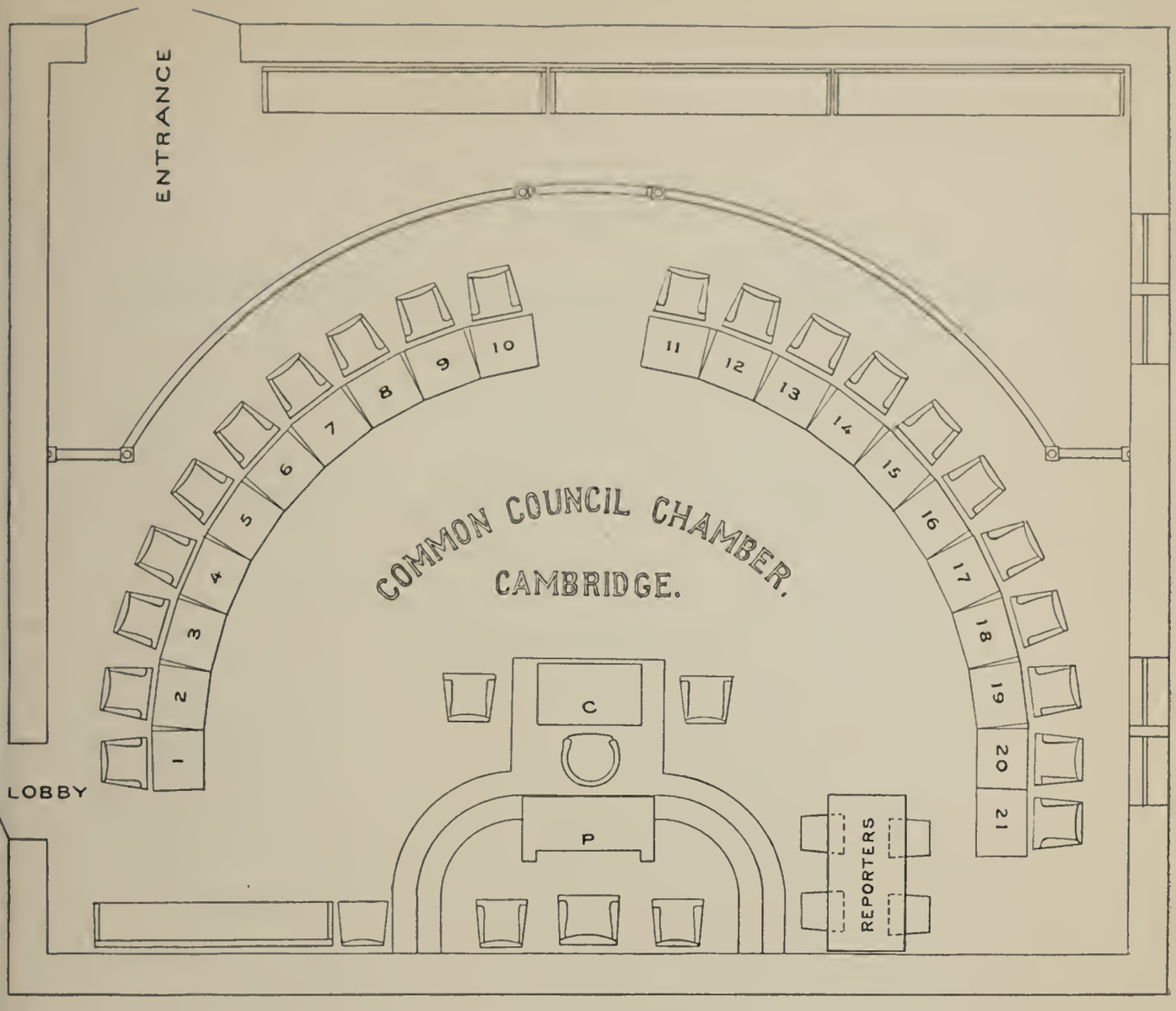
C — Edward J. Brandon, *City Clerk.*

M — Frank T. Evans, *City Messenger.*

Reporters :

1	John B. Whoriskey, Boston Globe.	5	Edgar L. Bean, Boston Herald.
2	J. Lee Robinson, Cambridge Tribune.	6	J. C. O'Mahoney, Camb. Democrat.
3	Burton L. Reed, Boston Advertiser.	7	Louis F. Conant, Boston Journal.
4	James H. Cox, Cambridge Times.	8	James W. Bean, Camb. Chronicle.
		9	Alice S. Geddes, Cambridge Press.

*On March 10, 1903, Alderman Coveney resigned as President, and Alderman Good was elected, Alderman Coveney thereafter taking seat No. 5.



KEY TO COMMON COUNCIL CHAMBER

CAMBRIDGE, 1903

P — Edward E. Clark, *President.*

1	Councilman	Elmore.	11	Councilman	Morrison.
2	"	Monk.	12	"	Stephens.
3	"	O'Neil.	13	"	Walcott.
4	"	Dudley.	14	"	Stearns.
5	"	Rhoades.	15	"	Barnard.
6	"	Caswell.	16	"	Shea.
7	"	Quinn.	17	"	McCarthy.
8	"	Downey.	18	"	Dinan.
9	"	Harrington.	19	"	Dyer.
10	"	Nelligan.	20	"	Meyers.

21 Councilman Reardon.

C — Edward A. Counihan, *Clerk.* William E. McAnaul, *Page.*

Reporters:

Philip R. Ammidon, Camb. Chronicle. Thomas A. P. Bordley, Cambridge Times.
Bessie F. G. Brainard, Cambridge Press. Chester W. Currie, Cambridge Tribune.

GOVERNMENT OF THE CITY OF CAMBRIDGE, 1903

Mayor

JOHN H. H. McNAMEE, 50 Mt. Vernon Street.

Board of Aldermen

Joseph O. Authier	21 Rice Street	Ward 11
James T. Barrett	8 Parnell Street	" 2
J. Edward Barry	347 Broadway	" 5
Stoughton Bell	164 Brattle Street	" 9
Hans L. Carstein	45 Cogswell Avenue	" 11
John W. Coveney	140 Otis Street	" 2
William R. Davis	349 Broadway	" 5
John F. Doherty	333 Huron Avenue	" 9
Michael H. Flynn	162 Columbia Street	" 4
Timothy W. Good	18 Wendell Street	" 9
Stephen H. Harrington	288 Elm Street	" 3

Clerk.

Edward J. Brandon.

Messenger.

Frank T. Evans.

Regular Meetings on Tuesday Evenings at 8 o'clock.

Common Council.

President.

EDWARD E. CLARK.

SOLOMON H. BARNARD	234 Allston Street	Ward	6
GEORGE B. CASWELL	27 River Street	"	7
EDWARD E. CLARK	340 Brookline Street	"	7
DANIEL J. DINAN	6 Winter Street	"	1
JEREMIAH F. DOWNEY	994 Cambridge Street	"	3
HOWLAND DUDLEY	24 Avon Hill Street	"	10
JOHN L. DYER	25 Mt. Pleasant Street	"	10
SAMUEL D. ELMORE	473 Broadway	"	8
JAMES HARRINGTON	173 Otis Street	"	2
DANIEL E. MCCARTHY	59 Spring Street	"	1
JULIUS MEYERS	417 Green Street	"	7
SYDNEY J. MONK	14 Centre Street	"	5
EDWARD MORRISON	68 Broadway	"	4
DAVID J. NELLIGAN	173 Rindge Avenue	"	11
THOMAS P. O'NEIL	52 Montgomery Street	"	11
JAMES F. QUINN	120 Willow Street	"	3
MAURICE REARDON	182 Spring Street	"	2
HERBERT A. RHOADES	26 Inman Street	"	5
MICHAEL J. SHEA	196 Broadway	"	4
HARRY N. STEARNS	64 Walker Street	"	9
GEORGE STEVENS,	53 Ellery Street	"	8
CHARLES WALCOTT	85 Sparks Street	"	9

Clerk.

EDWARD A. COUNIHAN.

Page.

WILLIAM E. MCANAUL.

Regular Meetings on Tuesday Evenings at 8 o'clock.

COMMITTEES OF THE CITY COUNCIL

JOINT STANDING COMMITTEES OF THE CITY COUNCIL.*

Accounts. Aldermen Flynn and Doherty; Councilmen Quinn, Caswell and O'Neil.

Assessors' Department. Alderman Harrington; Councilmen Stephens and Dinan.

City Engineering. Aldermen Barrett and Authier; Councilmen Dyer, Downey and Stephens.

City Home. Aldermen Carstein and Flynn; Councilmen Caswell, Morrison and O'Neil.

Claims. President Good, Aldermen Bell, Barrett and Doherty; President Clark, Councilmen Dyer, Walcott, Harrington, Barnard and O'Neil.

Finance. President Good, Aldermen Carstein, Barry and Barrett; President Clark, Councilmen Rhoades, Dudley, Quinn, Stearns and Meyers.

Fire Department. Aldermen Barry and Harrington; Councilmen Barnard, Dinan and Monk.

Health. Aldermen Flynn and Authier; Councilmen Rhoades, Shea and Walcott.

Highways. Aldermen Barrett, Carstein and Flynn; Councilmen Meyers, Nelligan, Stephens and Shea.

Legislative Matters. President Good, Aldermen Barry, Davis and Authier; President Clark, Councilmen Stearns, Rhoades, Dyer, Morrison and Reardon.

Ordinances. Aldermen Bell and Flynn; Councilmen Dudley, Reardon and Elmore.

Parks. Aldermen Authier and Davis; Councilmen Morrison, Harrington and Elmore.

Printing. Aldermen Barry and Harrington; Councilmen Quinn, Stephens and Dinan.

Public Instruction. Aldermen Davis and Bell; Councilmen Dudley, Stephens and Reardon.

Public Property. Aldermen Barry and Harrington; Councilmen Stearns, Downey and McCarthy.

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* March 10, 1903, President Coveney resigned from the presidency of the Board and from all committees and new assignments were made. The lists as published herein show the corrected assignments.

Rules and Orders. Aldermen Carstein and Davis; Councilmen Dudley, McCarthy and Elmore.

Water Supply. Aldermen Barry and Doherty; Councilmen Quinn, Reardon and Walcott.

Wires and Lamps. Aldermen Barry and Davis; Councilmen Dinan, Morrison and Nelligan.

STANDING COMMITTEES OF THE BOARD OF ALDERMEN.

Bonds. Aldermen Bell, Harrington and Flynn.

Claims. President Good, Aldermen Bell, Barrett and Doherty.

Elections and Returns. Aldermen Harrington, Bell and Authier.

Fire Department. Aldermen Barry, Authier and Harrington.

Health. Aldermen Flynn, Authier and Doherty.

Highways. Aldermen Barrett, Carstein and Flynn.

Licenses. Aldermen Doherty, Barrett and Harrington.

Parks. Aldermen Authier, Davis and Harrington.

Police. Aldermen Flynn, Bell and Davis.

Rules and Orders. Aldermen Carstein, Authier and Barry.

Sewers. Aldermen Barrett, Davis and Bell.

Soldiers' Aid. President Good, Aldermen Carstein, Barrett, Doherty and Authier.

Street Railways. Aldermen Authier, Doherty and Davis.

STANDING COMMITTEES OF THE COMMON COUNCIL.

Bills in the Second Reading. Councilmen Monk, Harrington and Shea.

Elections and Returns. Councilmen Downey, Monk and McCarthy.

Enrolled Ordinances. Councilmen Walcott, Meyers and Nelligan.

JOINT SPECIAL COMMITTEES.

Matters referred from last City Council. Aldermen Carstein, Good and Bell; Councilmen Stearns, Nelligan, Caswell, Harrington and Monk.

Recommendations in Mayor's Inaugural Address. President Good and Alderman Davis; Councilmen Elmore, McCarthy and O'Neil.

New Cambridge Bridge. Aldermen Barry and Doherty; Councilmen, Barnard, Downey and Shea.

Amendments to City Charter. President Good, Aldermen Carstein and Authier; President Clark, Councilmen Rhoades, Dudley, Meyers, Morrison and Reardon.

Rapid Transit. President Good, Aldermen Carstein and Barry; President Clark, Councilmen Dyer, Quinn and Barnard.

SPECIAL COMMITTEE OF BOARD OF ALDERMEN.

Matters referred from last Board. Aldermen Bell, Barry and Davis.

COMMITTEE APPOINTMENTS OF MEMBERS OF THE CITY COUNCIL.

PRESIDENT (ALDERMAN) COVENEY.*

Alderman (President) Good. Finance, Legislative Matters, Soldiers' Aid, Matters referred from last City Council, Amendments to City Charter, Rapid Transit.

Aldermen Authier. City Engineering, Health, Parks, Legislative Matters, Elections and Returns, Fire Department, Rules and Orders, Soldiers' Aid, Street Railways, Amendments to City Charter.

Alderman Barrett. City Engineering, Claims, Finance, Highways, Licenses, Sewers, Soldiers' Aid.

Alderman Barry. Finance, Fire Department, Legislative Matters, Printing, Public Property, Water Supply, Wires and Lamps, Rules and Orders, New Cambridge Bridge, Rapid Transit, Matters Referred from last Board of Aldermen.

Alderman Bell. Claims, Ordinances, Public Instruction, Bonds, Elections and Returns, Police, Sewers, Matters Referred from last City Council, Matters Referred from last Board of Aldermen.

Alderman Carstein. City Home, Finance, Highways, Rules and Orders, Soldiers' Aid, Matters Referred from last City Council, Amendments to City Charter, Rapid Transit.

Alderman Davis. Legislative Matters, Parks, Public Instruction, Rules and Orders, Wires and Lamps, Police, Sewers, Street Railways, Recommendations in Mayor's Inaugural Address, Matters referred from last Board of Aldermen.

Alderman Doherty. Accounts, Claims, Water Supply, Health, Licenses, Soldiers' Aid, Street Railways, New Cambridge Bridge.

Alderman Flynn. Accounts, Bonds, City Home, Health, Highways, Ordinances, Police.

Alderman Harrington. Assessors' Department, Fire Department, Licenses, Printing, Public Property, Bonds, Elections and Returns, Parks.

President Clark. Claims, Finance, Legislative Matters, Amendments to City Charter, Rapid Transit.

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* March 10, 1903, President Coveney resigned from the presidency of the Board and from all committees, and new assignments were made by President Good. The committee assignments as published herein are the corrected assignments.

Councilman Barnard. Claims, Fire Department, New Cambridge Bridge, Rapid Transit.

Councilman Caswell. Accounts, City Home, Matters referred from last City Council.

Councilman Dinan. Assessors' Department, Fire Department, Printing, Wires and Lamps.

Councilman Downey. City Engineering, Public Property, New Cambridge Bridge, Elections and Returns.

Councilman Dudley. Finance, Ordinances, Public Instruction, Rules and Orders, Amendments to City Charter.

Councilman Dyer. City Engineering, Claims, Legislative Matters, Rapid Transit.

Councilman Elmore. Ordinances, Parks, Rules and Orders, Recommendations in Mayor's Inaugural Address.

Councilman Harrington. Claims, Parks, Matters referred from last City Council, Bills in the Second Reading.

Councilman McCarthy. Public Property, Rules and Orders, Recommendations in Mayor's Inaugural Address, Elections and Returns.

Councilman Meyers. Finance, Highways, Amendments to City Charter, Enrolled Ordinances.

Councilman Monk. Fire Department, Matters referred from last City Council, Elections and Returns, Bills in the Second Reading.

Councilman Morrison. City Home, Legislative Matters, Parks, Wires and Lamps, Amendments to City Charter.

Councilman Nelligan. Highways, Wires and Lamps, Matters referred from last City Council, Enrolled Ordinances.

Councilman O'Neil. Accounts, City Home, Claims, Recommendations in Mayor's Inaugural Address.

Councilman Quinn. Accounts, Finance, Printing, Water Supply, Rapid Transit.

Councilman Reardon. Legislative Matters, Ordinances, Public Instruction, Water Supply, Amendments to City Charter.

Councilman Rhoades. Finance, Health, Legislative Matters, Amendments to City Charter.

Councilman Shea. Health, Highways, New Cambridge Bridge, Bills in the Second Reading.

Councilman Stearns. Finance, Legislative Matters, Public Property, Matters referred from last City Council.

Councilman Stephens. Assessors' Department, City Engineering, Highways, Printing, Public Instruction.

Councilman Walcott. Claims, Health, Water Supply, Enrolled Ordinances.

DEPARTMENTS AND BOARDS

EXECUTIVE DEPARTMENT.

JOHN H. H. MCNAMEE . . . *Mayor.*
Edward A. Counihan . . *Mayor's Clerk.*
Office Hours: 8 A. M. to 4 P. M.
Office, Rooms 17 and 18, City Hall. Telephone 463.

CITY CLERK DEPARTMENT.

EDWARD J. BRANDON . . . *City Clerk.*
Albert M. Pear . . . *Assistant City Clerk.*
Office Hours: 8 A. M. to 4 P. M.
Office, Rooms 8 and 9, City Hall. Telephone 419.

TREASURY DEPARTMENT.

WILLIAM W. DALLINGER, *City Treasurer and Collector of Taxes.*
Office Hours: 8 A. M. to 2 P. M.
Office, Rooms 3 and 4, City Hall. Telephone 602.

AUDITING DEPARTMENT.

HARRY T. UPHAM . . . . *City Auditor.*
Office Hours: 8 A. M. to 2 P. M.
Office, Rooms 1 and 2, City Hall. Telephone 602.

CLERK OF COMMITTEES DEPARTMENT.

JOHN MCDUFFIE . . . . *Clerk of Committees.*
Eben W. Pike . . . *Assistant.*
Office Hours: 8 A. M. to 4 P. M.
Office, Room 16, City Hall. Telephone 818.

CITY MESSENGER DEPARTMENT.

FRANK T. EVANS . . . . *City Messenger.*
William E. McAnaul . . *Assistant.*
Office Hours: 8 A. M. to 5 P. M.
Office, Room 11, City Hall. Telephone 650.

LAW DEPARTMENT.

GILBERT A. A. PEVEY . . . *City Solicitor.*

Office Hours (at City Hall) : Saturdays, 8 A. M. to 12 M.

Office, Room 17, City Hall. Telephone 463.

Boston Office, 22 Pemberton Square. Telephone 1071 Haymarket.

ENGINEERING DEPARTMENT.

LEWIS M. HASTINGS . . . . *City Engineer.*

*JAMES W. PIERCE . . . . *City Engineer.*

Theodore L. Pike . . . *Supt. of Sewers.*

Office Hours : 8 A. M. to 5 P. M.

Office, Rooms 30 and 31, City Hall. Telephone 471.

FIRE DEPARTMENT.

THOMAS J. CASEY . . . . *Chief.*

Nathaniel W. Bunker . . *Assistant Chief.*

Office Hours : 9 to 10 A. M.

Office, Room 23, City Hall. Telephone 650.

INSPECTION, ETC., OF BUILDINGS DEPARTMENT.

THOMAS F. TRACY, *Supt. of Public Buildings and Inspector of Buildings*

Office Hours : 8 A. M. to 4 P. M.

Office, Room 28, City Hall. Telephone 125.

HEALTH DEPARTMENT — BOARD OF HEALTH.

JOHN J. SCOTT . . . . . *Chairman.*

Term, three years.

Roswell Wetherbee, M. D., . . Term expires 1904.

Goodwin I. Isenberg . . . . Term expires 1905.

John J. Scott . . . . . Term expires 1906.

James B. Soper . . . . . *Clerk.*

Edwin Farnham, M. D. . . . *Medical Inspector.*

Office Hours : 8 A. M. to 4 P. M.

Rooms 25 and 26, City Hall. Telephone 345.

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* Assumed office May 1, 1903.

POLICE DEPARTMENT.

Lothrop J. Cloyes . . . . . *Chief of Police.*

Office Hours: 8 A. M. to 6 P. M.

Office at Central Square Building. Telephone 423.

STREET DEPARTMENT.

John T. Shea . . . . . *Supt. of Streets.*

Henry P. Fielding . . . . *Clerk.*

Office Hours: 8 A. M. to 4 P. M.

Office, Room 12, City Hall. Telephone 435.

INSPECTION OF MILK AND VINEGAR.

Philip P. Sharples . . . } *Inspector of Milk.*
*William C. Lane . . . } *Inspector of Vinegar.*

Office Hours: 8 to 11 A. M.

Office, Room 27, City Hall. Telephone 345.

ASSESSORS' DEPARTMENT — BOARD OF ASSESSORS.

Term, three years.

Jeremiah F. Donovan . . .	Term expires 1903.
Daniel B. Shaughnessy, *Secretary* .	Term expires 1904.
William F. Brooks, *Chairman* . .	Term expires 1905.

ASSISTANT ASSESSORS.

Ward 1	Manuel Andrew.
Ward 2	Bernard J. Brogan.
Ward 3	Michael H. Sullivan.
Ward 4	Patrick J. White.
Ward 5	Lyman W. Brooks.
Ward 6	Daniel J. Toomey.
Ward 7	William P. Purcell.
Ward 8	William Stolba.
Ward 9	Edward Grant.
Ward 10	Thomas F. Cosgrove.
Ward 11	Joseph A. Ryan.

Office Hours: 8 A. M. to 4 P. M.

Office, Rooms 21 and 22, City Hall. Telephone 244.

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* Assumed office April 23, 1903.

CITY ELECTRICAL DEPARTMENT.

* Charles F. Hopewell . . . . *City Electrician.*
** Timothy C. O'Hearn . . . . *City Electrician.*
Office Hours: 8 A. M. to 2 P. M.
Office, Room 28, City Hall. Telephone 125.

INSPECTION OF ANIMALS DEPARTMENT.

Charles E. Hadcock, M. D. V. . *Inspector of Animals.*
Residence, 25 Dana Street. (No office or hours.)

BRIDGE DEPARTMENT.

William J. Marvin, *Bridge Commissioner and Harbor Master.*
Residence, 58 Trowbridge Street. Telephone 281–2.
(No office or hours.)

SEALER OF WEIGHTS AND MEASURES DEPARTMENT.

A. Sherburne K. Clark . . . *Sealer.*
† George H. Dinan . . . . *Sealer.*
John C. Connors . . . . *Deputy Sealer.*
Office Hours: { Fridays, 8 A. M. to 4 P. M.
{ Saturdays, 8 A. M. to 12 M.
Office, Brattle Square Building. Telephone 35.

CITY PHYSICIAN.

‡ Lewis L. Bryant,
Residence, 930 Massachusetts Avenue.
† William G. Brousseau,
Residence, 2222 Massachusetts Avenue. Telephone 367–2.
(No office or hours.)

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* Charles F. Hopewell resigned on April 3, 1903.
** Timothy C. O'Hearn assumed office April 7, 1903.
† Assumed office May 7, 1903.
‡ Resigned May 1.

FENCE VIEWERS.

Lewis M. Hastings . . . . . City Hall.
Thomas F. Tracy . . . . . City Hall.
Telephones, 471, 125.

SCHOOL COMMITTEE.

JOHN H. H. MCNAMEE, Mayor . . *Chairman, ex-officio.*

Term ending in 1903.

Carolyn P. Chase . . . . . Ward 10
Philip M. Fitzsimmons . . . . Ward 2
William Taggard Piper . . . . Ward 9
J. Henry Russell . . . . . Ward 5
Charles F. Wyman . . . . Ward 7

Term ending in 1904.

George W. Bicknell . . . . Ward 5
Sherman R. Lancaster . . . . Ward 7
Arthur P. Stone . . . . . Ward 10
Charles H. Thurston . . . . Ward 8
Robert Walker . . . . . Ward 1

Term ending in 1905.

Warren P. Adams . . . . . Ward 8
Seth N. Gage . . . . . Ward 11
Mary E. Mitchell . . . . . Ward 6
Frank E. Wentworth . . . . Ward 3
Charles H. Williams . . . . Ward 4

Secretary and School Supply Agent.

SANFORD B. HUBBARD.

Superintendent of Schools.

FRANCIS COGSWELL.

Office Hours: 8.30 A.M. to 5 P.M.
Office, Rooms 13, 14 and 15, City Hall. Telephone 445.

CEMETERY DEPARTMENT — CEMETERY COMMISSIONERS.

George S. Saunders . . . . *Chairman.*

Term, three years.

Nathan C. Lombard . . . . Term expires 1904
Michael J. O'Brien . . . . Term expires 1904.
Herbert A. Chase . . . . . Term expries 1905.
George S. Saunders . . . . Term expires 1905.
John S. Clary . . . . . Term expires 1906.
John Lynch . . . . . Term expires 1906.

Edward J. Brandon . . . . *Clerk of the Board.*

Office, Rooms 8 and 9, City Hall. Telephone 419.

George D. Ford . . . . . *Supt. of Cemetery.*
John J. McKenzie . . . . . *Clerk of the Cemetery.*

Office Hours: at Cemetery, 8 A.M. to 5 P.M.

Office at Cemetery on Coolidge Avenue. Telephone, 289-3.

PERSON TO CAUSE TO BE PROPERLY INTERRED THE BODIES OF SOLDIERS AND SAILORS.

Eben W. Pike.

PUBLIC LIBRARY DEPARTMENT — TRUSTEES OF CAMBRIDGE PUBLIC LIBRARY.

Eugene A. McCarthy . . . . *President.*

For one year.

Philip M. Fitzsimmons of School Committee.

Citizens at large. Term, three years.

Thomas W. Higginson . . . . Term expires 1904.
Edward C. Wheeler . . . . Term expires 1904.
Albert M. Barnes . . . . . Term expires 1905.
Eugene A. McCarthy . . . . Term expires 1905.
John Buckley . . . . . Term expires 1906.
J. Henry Duckrey . . . . . Term expires 1906.

William L. R. Gifford . . . . *Secretary and Treasurer.*
William L. R. Gifford . . . . *Librarian.*

Library Open: 10 A.M. to 8 P.M.

Reading Room: 10 A.M. to 10 P.M.

Sunday, 2 to 10 P. M.

Office at Library Building, Broadway, Irving and Trowbridge Streets. Telephone 610.

WATER WORKS DEPARTMENT — CAMBRIDGE WATER BOARD.

WILLIAM B. DURANT	*President.*

Term, five years.

Wellington Fillmore	Term expires 1903.
Edmund H. Stevens	Term expires 1904.
George H. Howard	Term expires 1905.
William B. Durant	Term expires 1906.
Andrew J. Rady	Term expires 1907.

Walter H. Harding	*Clerk of the Board.*
Edwin C. Brooks	*Supt. of Water Works.*
Walter H. Harding	*Water Registrar.*

Office Hours: 8 A.M. to 4 P.M.

Office, Rooms 5 and 6, City Hall. Telephone 430.

REGISTRARS OF VOTERS.

JOHN P. MCCORMICK	*Chairman.*

Term, four years.

Charles B. Seagrave	Term expires 1903.
John P. McCormick	Term expires 1904.
Isaac S. Pear	Term expires 1905.
J. Frank Facey	Term expires 1906.

Isaac S. Pear	*Clerk.*

Office, Central Square Building. Telephone, 1027-3.

PARK DEPARTMENT — PARK COMMISSIONERS.

GEORGE HOWLAND COX . . .	*President.*

Term, three years.

Edmund Reardon	Term expires 1903.*
George Howland Cox	Term expires 1904.
Andrew J. Conlin	Term expires 1905.

Grace E. Hixon	*Clerk of the Board.*
James W. Pierce	*General Superintendent.*

Office Hours: 8 A. M. to 4 P. M.

Office, Room 10, City Hall. Telephone 650.

* John E. Dwyer to serve from May 1, in place of Edmund Reardon.

SINKING FUND DEPARTMENT — COMMISSIONERS OF THE SINKING FUNDS.

FRANK A. ALLEN . . . . . *Chairman.*

Term, three years.

Frank A. Allen	Term expires 1904.
Dana W. Hyde	Term expires 1904.
John C. Bullard	Term expires 1905.
George H. Howard	Term expires 1905.
George G. Wright	Term expires 1906.
Austin Ford	Term expires 1906.

John McDuffie . . . . . *Secretary.*
Willliam W. Dallinger . . . *Treasurer.*

OVERSEERS OF THE POOR DEPARTMENT — OVERSEERS OF THE POOR.

CHARLES WALKER . . . . *Chairman.*

Term, five years.

Alexander Millan	Term expires 1903.
Patrick Crowley	Term expires 1904.
Charles Bullock	Term expires 1905.
Charles Walker	Term expires 1906.
Jeremiah Crowley	Term expires 1907.

David P. Muzzey . . . . . *Secretary.*
Harold K. Estabrook . . . . *Visitor.*
Martin L. Eldridge, *Charles Goodrow } *Superintendent of City Home.*

Office Hours (at Central Sq. Building), 8 A. M. to 4 P. M.

Telephones { Office, 660. City Home, 189.

BOARD OF SURVEY.

WILLIAM E. DOYLE . . . . *Chairman.*

Term, three years

James A. Wood	Term expires 1904.
William E. Doyle	Term expires 1905.
John T. Scully	Term expires 1906.

John McDuffie . . . . . *Secretary.*

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* Assumed office May 1, 1903.

TRUSTEES OF THE DOWSE INSTITUTE.

FRANK A. ALLEN . . . . . *President.*

John H. H. McNamee . . . . . *Mayor, ex officio.*
Edward E. Clark, *President of Common Council, ex officio.*
George Howland Cox . . . . . Willard A. Bullard
Frank A. Allen.

George Howland Cox . . . . . *Secretary.*

TRUSTEES OF THE { SANDERS TEMPERANCE FUND. / BRIDGE CHARITABLE FUND.

John H. H. McNamee, Mayor, Timothy W. Good, President of Board of Aldermen, Edward E. Clark, President of Common Council,
Ex officiis.

ROSTER OF THE POLICE FORCE.

Chief of Police.

LOTHROP J. CLOYES.

Deputy Chief.

WILLIAM F. BATCHELDER.

Clerk.

EDWARD J. COMERFORD.

Captains of Police.

DISTRICT I.	DISTRICT II.	DISTRICT III.
FRED B. PULLEN.	JOHN F. MURRAY.	MARK J. FOLSOM.

Chief Inspector.
Capt. JAMES E. MURRAY.

Assistant Inspector.
Lieut. HENRY C. JONES.

Sergeants of Police.

DISTRICT I.	DISTRICT II.	DISTRICT III.
CALLAHAN, DANIEL	ALEXANDER, JAMES S.	PIKE, CHARLES L.
CONRY, MICHAEL J.	STEVENS, DAVID A.	MULLETT, WILLIAM

Officers on Special Duty.

HURLEY, PATRICK J. } At Chief's Office.
McBRIDE, JOHN J. }

COULTER, JOHN, City Hall. PRIEST, CHARLES W., Public Library.

Patrolmen.

DISTRICT I.

No. of Badge		Hat No.	No. of Badge		Hat No.
60	Aberle, Charles F.	143	67	Leahy, Dennis F.	105
98	Aberle, William H.	142	91	Leahy, Timothy F.	139
7	Barrington, George T.	107	44	Marston, Charles C.	130
28	Belcher, Edward F.	128	88	Mahoney, George J.	148
53	Blen, Elbridge S.	150	55	Maloy, John P.	126
69	Brennan, Michael J.	131	10	McBride, John J.	110
20	Corcoran, Timothy	120	16	McCabe, Edward J.	145
34	Culhane, Michael	127	27	McCann, Charles J.	141
40	Doyle, Patrick	112	1	McCrehan, John E.	101
74	Forristall, James B.	129	96	McFadden, Richard M.	146
8	Furbush, Joseph H.	108	18	McNulty, James E.	118
2	Graves, William H.	102	45	Murray, Patrick F.	133
77	Hezlitt, John A.	113	52	Priest, Charles W.	119
95	Hill, William H.	114	62	Roper, Bernard J.	134
47	Hixon, Robert T.	104	21	Smyth, George	121
58	Holt, James H. H.	111	24	Temple, Joseph C.	124
11	Horrigan, Edward F.	115	57	Walsh, David H.	144
17	Jewett, Dexter	117	92	Walsh, David L.	149
32	Keaney, James M.	132	3	White, Orrin B.	103
35	Ladd, Fred L.	135	79	Wyman, Charles W.	137

DISTRICT II.

No. of Badge		Hat No.	No. of Badge		Hat No.
51	Aylward, Richard H.	233	64	McMenimen, William H.	218
22	Campbell, Thomas M.	222	43	Mullen, Robert E.	210
56	Coulter, John	203	93	Neilon, John P.	219
68	Deehan, John W.	202	4	Neilon, Michael	204
94	Deihl, Antone B.	234	89	Parks, Joseph W.	205
86	Ellis, Fred M.	232	59	Real, Thomas J.	229
38	Ginty, Michael A.	209	70	Robinson, Fred A.	217
81	Gordon, Herbert	211	31	Robertson, William H.	231
41	Griffiths, John J.	225	73	Rowe, Thomas P.	220
82	Hackett, Mortimer M.	208	78	Rowe, William H.	201
14	Higgins, Benjamin F.	214	65	Shaughnessy, J. E.	206
33	Howe, William H. H.	212	61	Sullivan, Cornelius	227
72	McCaffrey, Bernard	215	80	Welch, Edward J.	207
26	McElroy, James L.	226	42	Wells, John H.	224
15	McKeown, William F.	230			

DISTRICT III.

No. of Badge		Hat No.	No. of Badge		Hat No.
5	Apel, Frederick	305	39	McCorry, Joseph F.	304
71	Counihan, Daniel F.	312	76	Mullins, William N.	306
66	Cox, James A.	303	75	Mulvaney, Simon J.	318
36	Dunlea, Patrick F.	311	85	Presho, Charles H.	325
50	Dynan, Thomas F.	322	83	Rice, Ralph R.	302
9	Hall, James P.	309	46	Scobey, Frank W.	301
37	Hurley, Patrick J.	310	19	Scully, Benjamin C.	307
87	Kelleher, John	313	63	Skelley, John W.	308
23	Law, Frederick W.	323	48	Winslow, John E.	315
30	McCarthy, Jermiah	314			

Reserve Officers.

No. of Badge		Hat No.	No. of Badge		Hat No.
6	Roberts, John W.	317	103	Kelley, Michael J.	138
54	Bradley, Charles E.	320	105	Davis, Harry W.	319
29	LaMarche, Frank D.	237	13	Coady, Thomas F.	324
101	Blanchard, Ernest E.	316	114	McCarthy, Jermiah P.	140
102	Canney, John J.	116	49	Shea, Thomas	106

Drivers of Patrol Wagons.

DISTRICT II.

John T. Cook.
John McCauley.

DISTRICT III.

John Coffey.
John Sullivan.

Ambulance Drivers.

Dow, Warren H.
Sherman, George E.

Matrons.

Mrs. E. S. Haines.
Mrs. A. M. Stearns.

Keeper of Lock-ups.

Lothrop J. Cloyes.

Person to receive Information of Damages by Dogs.

(Ch. 454, Acts 1889.)
Lothrop J. Cloyes.

TRUANT OFFICERS.

Lucian S. Cabot.
John Carmichael.
William H. Porter.
Thomas F. Riley.

CONSTABLES.

(Without power to serve civil process)

Edward W. Abbott.
Fred Bailey.
Joseph F. Boyle.
Thomas F. Burke.
A. Sherburne K. Clark.
John C. Connors.
John P. Conroy.
John J. Creedon.
Joseph J. Donahue.
Charles E. Goodrow.
Frank A. Hagar.
Joseph James.
John A. Jackson.
Charles A. Lincoln.
Francis A. McLaughlin.
Thomas H. McManus.
Daniel J. Mills.
Peter J. Murphy.
David J. Nelligan.
Daniel W. Parker.
George A. Patten.
Leander Sampson.
John Taylor.
Frank H. Wait.
Joseph B. Whoriskey.

CONSTABLES.

(With power to serve civil process.)

Edward Brady.
James A. Brown.
John Foster.
Joseph Fox.
Joseph N. Gilman.
Edward Grant.
James E. Lennon.
Charles F. Manning.
Denis J. Moynahan.
John J. O'Brien.
John J. Rafferty.
Frank E. Shaw.
Arthur M. Stewart.

UNDERTAKERS.

Forest M. Blake.
Joseph P. Calnan.
David F. Corcoran.
Jeremiah Corkery.
John W. Coveney.
Daniel P. Danehy.
Edwin L. Derby.
George E. Everett.
David Fudge.
Edward J. Fudge.
George H. Kelley.
Allen J. Litchfield.
Horace D. Litchfield.
Judson Litchfield.
C. Henry Lockhart.
Abiel E. Long.
George W. Long.
James F. Mullen.
John J. Murphy.
William N. Neally.
David J. Nelligan.
Peter J. Nelligan.
T. Louis O'Brien.
John O'Connell.

John J. Ross.
Daniel P. Shea.
James J. Shea.
Michael J. Shea.
John W. Skelley, Jr.
Ralph Smith.
William Stinson.
William A. Taylor.
Benjamin F. Wyeth.
Henry A. Wyeth.

AUCTIONEERS.

John K. Abbott.
John J. Ahern.
Wilbur S. Clarke.
John W. Coveney.
Patrick Crowley.
Henry J. Cunningham.
Watson G. Cutter.
Jeremiah F. Donovan.
William R. Ellis.
William L. Frankenstein.
Arthur H. Frost.
Amos W. B. Gooding.
Leander M. Hannum.
Stephen M. Harrington.
Charles Houlder.
Frank L. Howe.
William Kelly.
Samuel R. Knights.
Frank H. Lambert.
Louis Lemon.
James E. Lennon.
John T. Lynch.
John W. Mahady.
Henry L. Marcy.
Cornelius J. McArthur.
John B. McKenna.
Robert J. Melledge.
Charles L. Phillips.
John J. Rafferty.
Solomon A. Rich.
George H. Rodgers.
Thomas C. Scottron.
Frank E. Shaw.
Thomas W. Spencer.
Rolla E. Stockton.
Francis Traynor.
Walter C. Wardwell.
William F. Ware.

FIELD DRIVERS.

Charles F. Aberle.
William H. Aberle.
Richard H. Aylward.
Frederick Apel.
George T. Barrington.
Edward F. Belcher.
Ernest E. Blanchard.
Elbridge S. Blen.
Charles E. Bradley.
Michael J. Brennan.
Thomas F. Burke.
Thomas M. Campbell.
John J. Canney.
Thomas F. Coady.
John P. Conroy.
Timothy Corcoran.
James A. Cox.
John Coulter.
Edward J. Comerford.
Daniel F. Counihan.

Harry W. Davis.
Antone B. Deihl.
John W. Deehan.
Joseph J. Dohahue.
Patrick Doyle.
Patrick F. Dunlea.
Thomas F. Dynan.
Frederick M. Ellis.
James B. Forristall.
Joseph H. Furbush.
Michael A. Ginty.
Herbert Gordon.
William H. Graves.
John J. Griffiths.
Mortimer M. Hackett.
James P. Hall.
John A. Hezlitt.
Benjamin F. Higgins.
William H. Hill.
Robert T. Hixon.
James H. H. Holt.
Edward F. Horrigan.
William H. H. Howe.
Patrick F. Hurley.
Dexter Jewett.
James M. Keaney.
John Kelleher.
Michael J. Kelley.
Fred L. Ladd.
Frank D. La Marche.
Frederick W. Law.
Dennis F. Leahy.
Timothy F. Leahy.
George J. Mahoney.
Charles C. Marston.
John P. Maloy.
Edward J. McCabe.
Bernard McCaffrey.
John J. McBride.
Joseph F. McCorry.
Jeremiah McCarthy.
Jeremiah P. McCarthy.
John E. McCrehan.
Charles J. McCann.
James L. McElroy.
Richard M. McFadden.
William F. McKeown.
Francis A. McLaughlin.
William H. McMenniman.
James E. McNulty.
Robert E. Mullen.
William N. Mullins.
Simon J. Mulvaney.
Peter J. Murphy.
Patrick F. Murray.
John P. Neilon.
Michael Neilon.
Joseph W. Parks.
George A. Patten.
Charles H. Presho.
Charles W. Priest.
Thomas J. Real.
Ralph R. Rice.
Bernard J. Roper.
Frederick A. Robinson.
William H. Robertson.
John W. Roberts.
Thomas P. Rowe.
William H. Rowe.
Frank W. Scobey.
Benjamin C. Scully.
John E. Shaughnessy.
Thomas Shea.
John W. Skelley.
George Smyth.
Cornelius Sullivan.
Joseph C. Temple.
David H. Walsh.
David L. Walsh.
Edward J. Welch.
John H. Wells.
Orrin B. White.
John E. Winslow.
Charles W. Wyman.

MEASURERS OF WOOD AND BARK.

Orville R. Cooper.
Herbert T. Lawrence.
Robert A. Parry.
David C. Proudfoot.
Joseph P. Quilty.
Edward A. Smith.
Charles B. Wendell.

POUND KEEPER.

Robert Holden.

COMMITTEE FOR THE PRESERVATION OF FISH.

Edwin C. Brooks.
Theodore L. Pike.
Lewis M. Hastings.

WEIGHERS OF COAL.

Abraham A. Barber.
William Barber.
William J. Barrett.
Clarence G. Bartlett.
Preston L. Berry.
John F. Blevins.
George L. Bragan.
Andrew S. Brewer.
J. Hennessey Brine.
Silas E. Buck.
John E. Burgess.
Albert D. Burns.
Eugene A. F. Burtnett.
Frank E. Carman.
George L. Carrier.
Hans L. Carstein.
Augustine W. Clarke.
Charles N. Clark.
James W. Coleman.
Walter G. Coleman.
Marcella F. Coley.
Nelson B. Coll.
Jacintho S. Condinho.
Ernest P. Cook.
Orville R. Cooper.
Warren Crane.
Effie I. Crook.
Arthur R. Crooks.
David Crowley.
Timothy J Crowley.
Edward J. Dance.
Frank Davis.
William E. Dodge.
Daniel J. Donoghue.
John T. Downey.
William H. Durgin.
Cole Eliott.
William R. Everett.
Levi Fairbanks.
Alphonso P. Farnham.
William Farrell.
Robert Fawcett.
Samuel Fine.
Max Fishman.
George B. Fitzgerald.
Richard E. Fitzgerald.
George W. Frost.
Albert Gertson.
Victor Gertson.
Fred W. Goldsmith.
John J. Guiney.
Nellie F. Hanlon.
Timothy F. Hanlon.
Charles R. Hardy.

Lillian M. Harper.
Robert C. Harris.
Mortimer F. Hartley.
John T. Hayes.
Charles W. Herbst.
Harry B. S. Hinds.
Michael J. Hopkins.
Stanley Jennison.
Willliam H. Johnson.
John J. Jordon.
Jeremiah Kennedy.
Frederick A. Kreeb.
Charles F. Long.
James Malley.
Stanwood C. Mariner.
Harry W. Marston.
Leslie O. Martin.
Sarkis Martin.
John McAllister.
Daniel McCarthy.
James McDonald.
Herman Meyer.
Harry M. Montague.
John Moynahan.
John F. Mulcahey.
Daniel J. Murphy.
Abraham Nash.
Walter H. Nay.
Arthur G. Newton.
Daniel E. O'Brien.
James O'Brien.
Antonio Palisi.
Charles L. Parker.
Charles H. Paschal.
Charles Pierce.
Stephen A. Prohaska.
David Proudfoot.
David C. Proudfoot.
Edward P. Pullen.
Robert J. Purcell.
Frank W. Reed.
William H. Reed.
George Richardson.
James E. Rogers.
Samuel F. Rowe.
Alexander Russell.
Helena M. Schliephake.
Isador Saltman.
Daniel J. Sawyer.
Alonzo Shedd.
Edward A. Smith.
George A. Squires.
Charles W. Sullivan.
James O. Taylor.
Frank P. Towle.
John T. Ward.
Thomas H. Warren.
William Watkins.
Charles B. Wendell.
Patrick J. White.
Charles H. Wigmore.
Edward B. Wood.
Samuel Winningham.

INSPECTORS OF JUNK SHOPS, PAWNBROKERS' SHOPS, AND SECOND HAND STORES AND DEALERS.

Mark J. Folsom.
John F. Murray.
James E. Murray.
Frederick B. Pullen.

PUBLIC WEIGHERS.

Robert C. Bird.
Ernest E. Bradbury.
William D. Donovan.
John E. Fay.
James A. Ferguson.
Alexander S. Ford.
John P. Healey.
Robert Holden.
James Knowles.
Fred W. MacFarland.
Melvin MacFarland.
William Maloney.
John F. Reilly.
John M. Thayer.
James A. Whelan.

HAY WEIGHER.

William N. Neally.

INSPECTOR OF PRESSED OR BUNDLED HAY OR STRAW.

Harvey O. Titus.

MEASURERS OF GRAIN.

George H. Dinan.
John C. Connors.

PERSONS.

To seize all baskets, measures or vessels used or intended to be used in measuring charcoal, as provided in Sect. 88, Chap. 60, P. S.

George H. Dinan.
John C. Connors.

MEASURER AND SURVEYOR.

Henry L. Hale.

SURVEYOR OF MECHANICS' WORK.

Charles A. Mason.

STATE AND CITY ELECTIONS

HELD

NOVEMBER 4, 1902, DECEMBER 9, 1902

RESPECTIVELY

As Corrected by Recounts.

VOTES CAST FOR GOVERNOR AND OTHER STATE OFFICERS, REPRESENTATIVE IN CONGRESS, COUNCILLOR, SENATORS, COUNTY COMMISSIONER, AND REPRESENTATIVES IN THE GENERAL COURT, FOR CITY OFFICERS, AND ON THE LICENSE QUESTION.

STATE ELECTION, NOVEMBER 4, 1902.

CANDIDATES FOR

Names of Candidates.	Governor.							Lieut. Governor.							Secretary.							Treasurer.						
	Whole Number.	John L. Bates.	Michael T. Berry.	John C. Chase.	William A. Gaston.	William H. Partridge.	Blank.	Whole Number.	John Quincy Adams.	Thomas F. Brennan.	Oliver W. Cobb.	Curtis Guild, Jr.	Herbert C. Joyner.	Blank.	Whole Number.	Edward A. Buckland.	Herbert B. Griffin.	Jeremiah O'Fihelly.	William M. Olin.	Willmore B. Stone.	Blank.	Whole Number.	Edward S. Bradford.	Joseph L. Chalifoux.	Frederick A Nagler.	Daniel Parlin.	David Taylor.	Blank.
Ward 1, Precinct 1	395	43	7	34	294	2	15	395	50	12	2	36	260	35	395	41	....	11	40	258	45	395	41	257	10	1	35	51
Ward 1, Precinct 2	362	77	2	39	225	1	18	362	47	8	2	70	198	37	362	40	3	7	71	202	39	362	73	196	5	1	33	54
Ward 1, Totals....	757	120	9	73	519	3	33	757	97	20	4	106	458	72	757	81	3	18	111	460	84	757	114	453	15	2	68	105
Ward 2, Precinct 1	436	75	18	45	281	1	16	436	55	21	2	66	246	46	436	46	3	20	71	229	67	436	64	239	19	4	44	66
Ward 2, Precinct 2	335	51	9	46	216	1	12	335	51	6	3	48	194	33	335	54	3	7	48	181	42	335	49	172	7	3	47	57
Ward 2, Totals....	771	126	27	91	497	2	28	771	106	27	5	114	440	79	771	100	6	27	119	410	109	771	113	411	26	7	91	123
Ward 3, Precinct 1	545	53	11	49	390	1	41	545	57	15	1	45	329	98	545	44	2	11	40	327	121	545	37	327	17	2	47	115
Ward 3, Precinct 2	423	64	6	32	304	....	17	423	38	7	1	54	271	52	423	30	1	6	56	256	74	423	56	247	3	1	30	86
Ward 3, Precinct 3	400	108	7	46	218	2	19	400	55	8	2	102	199	34	400	50	1	6	90	194	59	400	94	189	6	2	49	60
Ward 3, Totals ..	1,368	225	24	127	912	3	77	1,368	150	30	4	201	799	184	1,368	124	4	23	186	777	254	1,368	187	763	26	5	126	261
Ward 4, Precinct 1	428	109	6	37	248	1	27	428	48	11	1	104	216	48	428	37	5	9	101	211	65	428	101	210	16	1	33	67
Ward 4, Precinct 2	393	174	5	48	144	6	16	393	64	9	10	163	121	26	393	54	6	5	174	114	40	393	178	110	9	8	49	39
Ward 4, Precinct 3	460	224	8	44	175	5	4	460	48	10	4	226	147	25	460	43	5	13	243	124	32	460	232	128	14	4	45	37
Ward 4, Totals....	1,281	507	19	129	567	12	47	1,281	160	30	15	493	484	99	1,281	134	16	27	518	449	137	1,281	511	448	39	13	127	143

Ward 5, Precinct 1	497	169	2	35	266	1	24	497	40	10	2	175	231	39	497	35	5	9	164	217	67	497	162	225	8	1	34	67
Ward 5, Precinct 2	447	248	1	19	172	1	6	447	24	4	2	261	139	17	447	20	3	4	267	125	28	447	258	133	5	4	19	28
Ward 5, Precinct 3	407	272	1	15	108	6	5	407	20	2	6	292	70	17	407	12	6	4	304	63	18	407	305	59	3	7	13	20
Ward 5, Totals....	1,351	689	4	69	546	8	35	1,351	84	16	10	728	440	73	1,351	67	14	17	735	405	113	1,351	725	417	16	12	66	115
Ward 6, Precinct 1	383	191	7	45	120	6	14	383	54	8	8	183	101	29	383	53	7	8	179	96	40	383	188	100	7	6	46	36
Ward 6, Precinct 2	440	193	7	42	189	3	6	440	50	11	5	193	165	16	440	43	5	8	188	171	25	440	189	169	8	5	38	31
Ward 6, Precinct 3	453	294	3	25	114	4	13	453	37	7	3	293	95	18	453	22	5	8	301	93	24	453	305	88	7	5	23	25
Ward 6, Totals....	1,276	678	17	112	423	13	33	1,276	141	26	16	669	361	63	1,276	118	17	24	668	360	89	1,276	682	357	22	16	107	92
Ward 7, Precinct 1	452	327	5	31	72	4	13	452	40	....	5	327	66	14	452	24	6	....	327	61	34	452	333	61	....	5	28	25
Ward 7, Precinct 2	501	196	4	28	256	3	14	501	29	5	5	192	240	30	501	26	4	4	198	230	39	501	193	230	5	2	30	41
Ward 7, Precinct 3	435	218	6	44	146	11	10	435	53	10	13	211	128	20	435	42	9	8	221	119	36	435	222	120	7	10	37	39
Ward 7, Totals....	1,388	741	15	103	474	18	37	1,388	122	15	23	730	434	64	1,388	92	19	12	746	410	109	1,388	748	411	12	17	95	105
Ward 8, Precinct 1	333	171	...	12	141	....	9	333	13	1	....	181	121	17	333	8	2	1	190	112	20	333	195	102	....	1	10	25
Ward 8, Precinct 2	388	217	3	9	147	3	9	388	18	1	3	235	118	13	388	15	5	....	235	114	19	388	237	107	1	2	15	26
Ward 8, Precinct 3	398	95	1	24	257	1	20	398	30	8	2	93	229	36	398	26	2	6	98	221	45	398	101	216	3	1	29	48
Ward 8, Totals....	1,119	483	4	45	545	4	38	1,119	61	10	5	509	468	66	1,119	49	9	7	523	447	84	1,119	533	425	4	4	54	99
Ward 9, Precinct 1	548	304	1	9	222	1	11	548	22	2	26	328	144	26	548	11	5	2	370	134	26	548	375	119	2	4	11	37
Ward 9, Precinct 2	559	197	3	53	287	2	17	559	29	6	....	224	260	40	559	19	3	7	244	243	43	559	236	248	4	1	20	50
Ward 9, Totals....	1,107	501	4	62	509	3	28	1,107	51	8	26	552	404	66	1,107	30	8	9	614	377	69	1,107	611	367	6	5	31	87
Ward 10, Precinct 1	424	283	1	5	125	7	3	424	10	....	9	301	93	11	424	5	8	...	316	82	13	424	320	75	1	9	4	15
Ward 10, Precinct 2	539	203	5	18	299	1	13	539	26	9	2	220	248	34	539	20	4	9	227	245	34	539	225	248	6	3	15	42
Ward 10, Totals....	963	486	6	23	424	8	16	963	36	9	11	521	341	45	963	25	12	9	543	327	47	963	545	323	7	12	19	57
Ward 11, Precinct 1	627	342	2	40	226	2	15	627	46	8	5	338	201	29	627	31	5	4	335	205	47	627	335	213	1	8	25	45
Ward 11, Precinct 2	593	130	16	38	385	2	22	593	41	23	3	126	346	54	593	26	3	20	127	349	68	593	124	351	18	3	31	66
Ward 11, Totals....	1,220	472	18	78	611	4	37	1,220	87	31	8	464	547	83	1,220	57	8	24	462	554	115	1,220	459	564	19	11	56	111
Grand Totals.....	12,601	5,028	147	912	6,027	78	409	12,601	1,095	222	127	5,087	5,176	894	12,601	877	116	197	5,225	4,976	1,210	12,601	5,228	4,939	192	104	840	1,298

CANDIDATES FOR

NAMES OF CANDIDATES.	AUDITOR.								ATTORNEY GENERAL.							REP. IN CONGRESS.							COUNCILLOR.				
	Whole Number.	David Morrison.	S. Fremont Packard.	Charles Stoeber.	Thomas C. Thacher.	Henry E. Turner.	Gen. Kimball.	Blank.	Whole Number.	Allen Coffin.	Charles E. Fenner.	John J. Flaherty.	John A. Henley.	Herbert Parker.	Blank.	Whole Number.	Charles A. Johnson.	Grenville S. MacFarland	Samuel W. McCall.	Charles W. White.	Frederick W. Dallinger	Blank.	Whole Number.	Edwin R. Hoag.	George A. Sanderson.	Frederick W. Wolffer.	Blank.
Ward 1, Precinct 1	395	4	36	9	251	38		57	395		38	264	8	38	47	395	6	263	54	41		31	395	36	267	41	51
Ward 1, Precinct 2	362	3	34	9	188	68		60	362	2	31	202	8	68	51	362	12	191	88	31		40	362	72	184	59	47
Ward 1, Totals....	757	7	70	18	439	106		117	757	2	69	466	16	106	98	757	18	454	142	72		71	757	108	451	100	98
Ward 2, Precinct 1	436	1	42	21	231	68		73	436	2	43	238	18	65	70	436	26	233	84	42		51	436	61	235	50	90
Ward 2, Precinct 2	335	4	47	5	174	39		66	335	4	50	180	7	44	50	335	8	181	62	40		44	335	44	183	48	60
Ward 2, Totals....	771	5	89	26	405	107		139	771	6	93	418	25	109	120	771	34	414	146	82		95	771	105	418	98	150
Ward 3, Precinct 1	545	2	44	38	300	38		123	545	1	43	340	12	38	111	545	12	354	54	37		88	545	37	340	53	115
Ward 3, Precinct 2	423	1	30	3	249	52		88	423	1	29	257	3	53	80	423	3	277	66	25		52	423	53	261	31	78
Ward 3, Precinct 3	400	1	47	8	184	86		74	400	2	47	202	5	83	61	400	7	195	103	37		58	400	82	198	47	73
Ward 3, Totals....	1,368	4	121	49	733	176		285	1,368	4	119	799	20	174	252	1,368	22	826	223	99		198	1,368	172	799	131	266
Ward 4, Precinct 1	428	5	32	13	208	95		75	428	8	31	220	8	77	84	428	12	218	114	25		59	428	103	222	33	70
Ward 4, Precinct 2	393	8	49	7	114	171		44	393	13	45	115	7	169	44	393	15	115	188	46		29	393	167	127	48	51
Ward 4, Precinct 3	460	9	43	11	131	225		41	460	10	38	134	11	230	37	460	14	124	256	37		29	460	222	142	49	47
Ward 4, Totals....	1,281	22	124	31	453	491		160	1,281	31	114	469	26	476	165	1,281	41	457	558	108		117	1,281	492	491	130	168
Ward 5, Precinct 1	497	5	29	6	221	164		72	497	9	39	210	7	165	67	497	9	220	193	20		55	497	156	230	31	80
Ward 5, Precinct 2	447	6	18	6	131	254		32	447	3	19	128	3	261	33	447	3	125	284	16		19	447	253	136	23	35
Ward 5, Precinct 3	407	8	12	2	70	292		23	407	11	14	53		311	18	407	2	57	318	14		16	407	299	67	12	29
Ward 5, Totals....	1,351	19	59	14	422	710		127	1,351	23	72	391	10	737	118	1,351	14	402	795	50		90	1,351	708	433	66	144

Ward 6, Precinct 1	383	13	47	10	100	168		45	383	14	45	107	9	170	38	383	12	101	201	37		32	383	179	103	49	52
Ward 6, Precinct 2	440	4	43	5	170	183		35	440	4	45	166	7	185	33	440	14	168	204	35		19	440	185	173	43	39
Ward 6, Precinct 3	453	4	28	5	76	305		35	453	8	30	80	3	304	28	453	6	83	321	23		20	453	302	91	29	31
Ward 6, Totals...	1,276	21	118	20	346	656		115	1,276	26	120	353	19	659	99	1,276	32	352	726	95		71	1,276	666	367	121	122
Ward 7, Precinct 1	452	8	26	1	65	322		30	452	6	24	64	1	330	27	452	2	59	332	18		41	452	325	65	20	42
Ward 7, Precinct 2	501	3	31	5	227	187		48	501	5	33	237	6	182	38	501	8	237	202	25		29	501	191	235	28	47
Ward 7, Precinct 3	435	11	34	9	121	215		45	435	11	39	127	6	213	39	435	11	121	244	30		29	435	219	130	45	41
Ward 7, Totals....	1,388	22	91	15	413	724		123	1,388	22	96	428	13	725	104	1,388	21	417	778	73		99	1,388	735	430	93	130
Ward 8, Precinct 1	333	1	7	3	108	183	1	30	333	6	10	100	1	192	24	333	1	99	213	7		13	333	184	103	13	33
Ward 8, Precinct 2	388	2	14	2	118	225		27	388	6	11	103	5	239	24	388	5	98	256	8		21	388	227	119	16	26
Ward 8, Precinct 3	398	2	24	7	221	88		56	398	2	24	227	5	88	52	398	4	226	113	16		39	398	91	230	26	51
Ward 8, Totals....	1,119	5	45	12	447	496	1	113	1,119	14	45	430	11	519	100	1,119	10	423	582	31		73	1,119	502	452	55	110
Ward 9, Precinct 1	548	8	12	2	139	352		35	548	13	9	120	1	370	35	548	1	117	395	9		26	548	353	143	12	40
Ward 9, Precinct 2	559	3	19	3	254	227		53	559	8	15	245		242	49	559	6	242	256	17		38	559	217	265	18	59
Ward 9, Totals....	1,107	11	31	5	393	579		88	1,107	21	24	365	1	612	84	1,107	7	359	651	26		64	1,107	570	408	30	99
Ward 10, Precinct 1	424	10	4	1	82	312		15	424	11	5	70	2	323	13	424	1	61	345	4		13	424	308	90	7	19
Ward 10, Precinct 2	539	4	19	9	243	218		46	539	3	20	243	6	225	42	539	8	259	228	16	1	27	539	206	261	21	51
Ward 10, Totals...	963	14	23	10	325	530		61	963	14	25	313	8	548	55	963	9	320	573	20	1	40	963	514	351	28	70
Ward 11, Precinct 1	627	8	28	4	206	328		53	627	9	28	208	1	337	44	627	4	219	355	18		31	627	325	215	30	57
Ward 11, Precinct 2	593	4	32	16	343	121		77	593	5	32	356	16	110	74	593	16	382	135	20		40	593	112	361	33	87
Ward 11, Totals...	1,220	12	60	20	549	449		130	1,220	14	60	564	17	447	118	1,220	20	601	490	38		71	1,220	437	576	63	144
Grand Totals.....	12,601	142	831	220	4,925	5,024	1	1,458	12,601	177	837	4,996	166	5,112	1,313	12,601	228	5,025	5,664	694	1	989	12,601	5,009	5,176	915	1,501

CANDIDATES FOR REPRESENTATIVES IN GENERAL COURT.

NAMES OF CANDIDATES.	3RD MIDDLESEX.					2ND MIDDLESEX.								4TH MIDDLESEX.								1ST MIDDLESEX.					5TH MIDDLESEX.				
	Whole Number.	Daniel De Bay.	David Fudge.	Henry F. Lehan.	Blank.	Whole Number.	James F. Aylward.	Samuel W. Bailey.	Harleigh J. Bushway.	Jeremiah F. Donovan.	Francis W. Hancock.	Hans W. Johnson.	Blank.	Whole Number.	Patrick A Berkeley.	J. H. Fitzgerald	Eben H. Googins.	Robert C. Lehman.	Robert Lusk.	William J. Rounds.	Frank Hackett.	Blank.	Whole Number.	James J. Myers.	George A. Perkins.	James A. Hill.	Blank.	Whole Number.	Edgar E. Chester.	Frederick S. Deitrick.	William H. Lewis.	Blank.
Ward 1, Precinct 1	395	36	56	273	30																										
Ward 1, Precinct 2	362	35	88	204	35																										
Ward 1, Totals....	757	71	144	477	65																										
Ward 2, Precinct 1	436	55	85	241	55																										
Ward 2, Precinct 2	335	46	65	197	27																										
Ward 2, Totals....	771	101	150	438	82																										
Ward 3, Precinct 1						545	414	31	57	398	26	22	142																		
Ward 3, Precinct 2						423	296	37	75	280	22	19	117																		
Ward 3, Precinct 3						400	217	76	129	240	30	16	92																		
Ward 3, Totals....						1,368	927	144	261	918	78	57	351																		
Ward 4, Precinct 1						428	218	87	121	257	32	19	122																		
Ward 4, Precinct 2						393	122	148	196	149	45	37	89																		
Ward 4, Precinct 3						460	145	205	233	169	33	33	102																		
Ward 4, Totals....						1,281	485	440	550	575	110	89	313																		
Ward 5, Precinct 1						497	243	149	178	267	21	18	118																		
Ward 5, Precinct 2						447	160	224	243	161	15	14	77																		
Ward 5, Precinct 3						407	69	302	278	62	12	9	82																		
Ward 5, Totals....						1,351	472	675	699	490	48	41	277																		

Ward 6, Precinct 1														383	92	107	182	42	36	177		130										
Ward 6, Precinct 2														440	164	152	187	36	28	186		127										
Ward 6, Precinct 3														453	75	82	300	22	20	314		93										
Ward 6, Totals ...														1,276	331	341	669	100	84	677		350										
Ward 7, Precinct 1														452	49	51	335	14	17	331		107										
Ward 7, Precinct 2														501	229	194	194	25	20	186	1	153										
Ward 7, Precinct 3														435	117	110	228	39	34	230		112										
Ward 7, Totals....														1,388	395	355	757	78	71	747	1	372										
Ward 8, Precinct 1																							333	204	109	1	19					
Ward 8, Precinct 2																							388	253	116		19					
Ward 8, Precinct 3																							398	128	243		27					
Ward 8, Totals....																							1,119	585	468	1	65					
Ward 9, Precinct 1																							548	414	122		12					
Ward 9, Precinct 2																							559	258	263		38					
Ward 9, Totals....																							1,107	672	385		50					
Ward 10, Precinct 1																												424	4	107	303	10
Ward 10, Precinct 2																												539	10	301	215	13
Ward 10, Totals....																												963	14	408	518	23
Ward 11, Precinct 1																												627	12	272	324	19
Ward 11, Precinct 2																												593	16	433	130	14
Ward 11, Totals....																												1,220	28	705	454	33
Grand Totals.....	1,528	172	294	915	147	4,000	1,884	1,259	1,510	1,983	236	187	941	2,664	726	696	1,426	178	155	1,424	1	722	2,226	1,257	853	1	115	2,183	42	1,113	972	56

CANDIDATES FOR

Names of Candidates.	Senator 2nd Suffolk.					Senator 2nd Middlesex.					County Commissioner.					
	Whole Number	William P. Bryant.	John T. Galvin.	Arthur Harrington.	Blank.	Whole Number	Albert S. Apsey.	Jules E. Loubris.	James A. Montgomery.	Blank.	Whole Number	George R. Duren.	Levi S. Gould.	Arthur Staveley.	Luther S. Wood.	Blank.
Ward 1, Prec. 1	395	42	56	262	35						395	260	45	39	1	50
Ward 1, Prec. 2	362	73	46	206	37						362	196	81	35	2	48
Ward 1, Totals.	757	115	102	468	72						757	456	126	74	3	98
Ward 2, Prec. 1	436	69	65	245	57						436	229	66	55	1	85
Ward 2, Prec. 2	335	51	54	184	46						335	171	56	50	1	57
Ward 2, Totals.	771	120	119	429	103						771	400	122	105	2	142
Ward 3, Prec. 1						545	40	32	442	31	545	339	39	47	1	119
Ward 3, Prec. 2						423	59	20	310	34	423	246	52	32	2	91
Ward 3, Prec. 3						400	93	40	244	23	400	198	88	45	4	65
Ward 3, Totals.						1,368	192	92	996	88	1,368	783	179	124	7	275
Ward 4, Prec. 1						428	118	28	237	45	428	217	101	41	5	64
Ward 4, Prec. 2						393	178	38	141	36	393	120	167	49	11	46
Ward 4, Prec. 3						460	223	32	174	31	460	127	226	56	7	44
Ward 4, Totals.						1,281	519	98	552	112	1,281	464	494	146	23	154
Ward 5, Prec 1						497	156	21	291	29	497	231	160	32	3	71
Ward 5, Prec. 2						447	252	16	161	18	447	137	248	21	3	38
Ward 5, Prec. 3						407	310	12	69	16	407	63	293	12	7	32
Ward 5, Totals.						1,351	718	49	521	63	1,351	431	701	65	13	141
Ward 6, Prec. 1						383	192	44	119	28	383	103	182	49	8	41
Ward 6, Prec. 2						440	195	43	195	7	440	168	189	46	10	27
Ward 6, Prec. 3						453	296	25	106	26	453	86	299	29	7	32
Ward 6, Totals.						1,276	683	112	420	61	1,276	357	670	124	25	100
Ward 7, Prec. 1						452	339	14	76	23	452	60	316	18	8	50
Ward 7, Prec. 2						501	207	22	251	21	501	227	184	31	2	57
Ward 7, Prec. 3						435	229	41	142	23	435	122	222	39	11	42
Ward 7, Totals.						1,388	775	77	469	67	1,388	409	722	87	21	149
Ward 8, Prec. 1						333	200	6	114	13	333	95	191	8	3	36
Ward 8, Prec. 2						388	237	23	113	15	388	106	237	11	3	31
Ward 8, Prec. 3						398	109	23	243	23	398	234	88	23	4	49
Ward 8, Totals.						1,119	546	52	470	51	1,119	435	516	42	10	116
Ward 9, Prec. 1						548	386	26	116	20	548	122	366	12	4	44
Ward 9, Prec. 2						559	250	15	262	32	559	251	224	18	6	60
Ward 9, Totals.						1,107	636	41	378	52	1,107	373	590	30	10	104
Ward 10, Prec. 1						424	307	9	93	15	424	74	305	8	12	25
Ward 10, Prec. 2						539	224	15	274	26	539	254	213	22	5	45
Ward 10, Totals						963	531	24	367	41	963	328	518	30	17	70
Ward 11, Prec. 1						627	358	25	219	25	627	210	334	28	7	48
Ward 11, Prec. 2						593	177	20	361	35	593	367	110	31	9	76
Ward 11, Totals.						1,220	535	45	580	60	1,220	577	444	59	16	124
Grand Totals...	1,528	235	221	897	175	11,073	5,135	590	4,753	595	12,601	5,013	5,082	886	147	1,473

CITY ELECTION

DECEMBER 9, 1902.

Votes cast for City Officers, and on the License Question.

As Corrected by Recounts.

Name of Candidates	MAYOR. Whole Number	John K. Abbott.	John A. Aitken.	Edgar E. Chester.	John H. H. McNamee.	Walter C. Wardwell.	Blank.	ASSESSOR. Whole Number	William F. Brooks.	Joshua G. Gooch	Robert Lehman.	Blank.	LIQUOR LICENSES. Whole Number	Yes.	No.	Blank.
Wd. 1, Pr. 1	480	1	6	1	412	53	7	480	382	59	12	27	480	268	164	48
" 1, " 2	419		3		312	100	4	419	298	89	8	24	419	195	180	44
Wd. 1, Totals	899	1	9	1	724	153	11	899	680	148	20	51	899	463	344	92
Wd. 2, Pr. 1	501	4	6	8	391	89	3	501	361	85	24	31	501	256	199	46
" 2, " 2	405		6	1	331	59	8	405	299	57	21	28	405	190	177	38
Wd. 2, Totals	906	4	12	9	722	148	11	906	660	142	45	59	906	446	376	84
Wd. 3, Pr. 1	582	2	5	1	503	60	11	582	485	48	15	34	582	312	201	69
" 3, " 2	434	3	4	1	356	62	8	434	333	64	7	30	434	234	151	49
" 3, " 3	405		13	4	276	107	5	405	276	92	16	21	405	163	202	40
Wd. 3, Totals	1,421	5	22	6	1,135	229	24	1,421	1,094	204	38	85	1,421	709	554	158
Wd. 4, Pr. 1	440	1	2	1	304	114	18	440	283	106	10	41	440	236	152	52
" 4, " 2	398	3	10	3	168	206	8	398	160	198	22	18	398	119	248	31
" 4, " 3	513	1	12	4	184	303	9	513	174	297	21	*21	513	113	366	34
Wd. 4, Totals	1,351	5	24	8	656	623	35	1,351	617	601	53	80	1,351	468	766	117
Wd. 5, Pr. 1	519	1	3	1	297	213	4	519	289	194	9	27	519	162	316	41
" 5, " 2	453		3	1	145	298	6	453	147	291	7	8	453	86	336	31
" 5, " 3	438		4		62	369	3	438	63	362	4	9	438	61	356	21
Wd. 5, Totals	1,410	1	10	2	504	880	13	1,410	499	847	20	44	1,410	309	1,008	93
Wd. 6, Pr. 1	476	3	17	3	163	277	13	476	167	253	23	33	476	139	279	58
" 6, " 2	528	2	6	5	235	279	1	528	232	266	16	14	528	156	335	37
" 6, " 3	508	1	6	2	122	374	3	508	119	364	8	17	508	82	399	27
Wd. 6, Totals	1,512	6	29	10	520	930	17	1,512	518	883	47	64	1,512	377	1,013	122
Wd. 7, Pr. 1	521		5		79	432	5	521	84	414	5	18	521	99	395	27
" 7, " 2	594	1	5	2	332	248	6	594	315	241	12	26	593	190	341	62
" 7, " 3	535		10	1	200	317	7	535	193	301	18	23	535	135	360	40
Wd. 7, Totals	1,650	1	20	3	611	997	18	1,650	592	956	35	67	1,649	424	1,096	129
Wd. 8, Pr. 1	378		2		119	251	6	378	122	246	2	8	378	80	272	26
" 8, " 2	469	2	1	1	131	327	7	469	122	330	8	9	469	105	332	32
" 8, " 3	502		1	1	357	138	5	502	349	132	4	17	502	247	212	43
Wd. 8, Totals	1,349	2	4	2	607	716	18	1,349	593	708	14	34	1,349	432	816	101
Wd. 9, Pr. 1	629	4			132	491	2	629	139	475	4	11	629	128	470	31
" 9, " 2	644	1	5		310	314	14	644	311	310	9	14	644	207	383	54
Wd. 9, Totals	1,273	5	5		442	805	16	1,273	450	785	13	25	1,273	335	853	85
Wd. 10, Pr. 1	449	1	2	1	85	358	2	449	85	358	3	3	449	40	392	17
" 10, " 2	554	1	1	2	306	238	6	554	293	245	3	13	554	150	360	44
Wd. 10, Tot'ls	1,003	2	3	3	391	596	8	1,003	378	603	6	16	1,003	190	752	61
Wd. 11, Pr. 1	650	1	4		245	396	4	650	256	361	10	23	650	118	485	47
" 11, " 2	629	4	3	6	478	130	8	629	459	125	11	34	629	209	367	53
Wd. 11, Tot'ls	1,279	5	7	6	723	526	12	1,279	715	486	21	57	1,279	327	852	100
Gr. Totals..	14,053	37	145	50	7,035	6,603	183	14,053	6,796	6,363	312	582	14,052	4,480	8,430	1,142

*1 vote scattering.

CANDIDATES FOR ALDERMEN.

NAMES OF CANDIDATES.	Whole Number.	Joseph O. Authier.	James T. Barrett.	J. Edward Barry.	Saul Beaumont.	Stoughton Bell.	William W. Bird.	Hans L. Carstein.	John W. Coveney.	William R. Davis.	Daniel E. De Bay.	John F. Doherty.	J. Edwin Fairbairn.	Michael H. Flynn.	Nils T. Fuglestad.	Timothy W. Good.	Stephen H. Harrington.	Alfred Johnson.	Hans W. Johnson.	George Keefe.	Charles H. Lake.	Henry B. Leighton.	Henry A. Locke.	Jules E. Loubris.	Robert Lusk.	John D. Merrill.	John F. Murphy.	George W. Norton.	John J. Scott.	Joseph E. Sharkey.	Alexander J. Sullivan.	Samuel Usher.	Blank.
WARD 1.																																	
Precinct 1.....	480	360	386	363	20	47	48	52	3?8	51	17	370	57	368	10	350	367	9	8	18	45	47	47	11	10	46	24	51	348	356	367	46	593
" 2.....	419	275	280	275	12	84	75	73	295	83	18	276	95	271	11	274	287	6	11	13	79	74	66	12	7	80	14	76	273	260	290	65	599
Ward 1, Totals	899	635	666	638	32	131	123	125	683	134	35	646	152	639	21	624	654	15	19	31	124	121	113	23	17	126	38	127	621	616	657	111	1192
WARD 2.																																	
Precinct 1.....	501	346	369	352	33	85	76	81	374	78	26	346	81	330	15	334	350	17	17	25	78	79	66	13	14	71	42	78	335	335	347	74	644
" 2.....	405	299	315	299	20	54	47	57	308	59	13	301	63	293	10	289	2?8	10	12	18	47	50	41	14	12	50	20	53	290	289	298	38	488
Ward 2, Totals	906	645	684	651	53	139	123	138	682	137	39	647	144	623	25	623	648	27	29	43	125	129	107	27	26	121	62	131	625	624	645	112	1132
WARD 3.																																	
Precinct 1.....	582	455	488	457	33	37	37	39	485	67	23	462	39	467	14	458	482	13	19	24	36	34	28	15	18	37	28	46	447	458	459	34	668
" 2.....	434	304	327	316	15	58	53	59	336	66	9	310	58	327	4	313	335	5	10	11	57	53	48	6	10	53	21	70	302	310	307	51	570
" 3.....	405	252	270	262	19	91	89	104	266	101	17	257	95	266	11	261	260	18	21	28	90	87	84	18	18	83	18	107	246	255	259	82	420
Ward 3, Totals	1421	1011	1080	1035	67	186	179	202	1087	234	49	1029	192	1060	29	1032	1077	36	50	63	183	174	160	39	46	173	67	223	995	1023	1025	167	1658
WARD 4.																																	
Precinct 1.....	440	260	270	271	19	94	88	101	283	110	11	278	97	279	15	263	260	11	10	15	94	89	84	7	8	93	9	92	246	241	269	86	787
" 2.....	398	147	149	156	26	197	186	199	156	207	19	151	197	164	12	155	147	17	26	23	190	196	193	18	20	196	21	207	140	144	151	190	378
" 3.....	513	158	161	165	24	291	273	288	165	303	20	160	289	175	16	163	154	18	21	26	283	289	281	18	18	288	23	284	154	156	154	276	549
Ward 4, Totals	1351	565	580	592	69	582	547	588	604	620	50	589	583	618	43	581	561	46	57	64	567	574	558	43	46	577	53	583	540	541	574	552	1714
WARD 5.																																	
Precinct 1.....	519	265	289	281	9	193	189	199	279	216	12	269	192	278	8	272	276	10	12	16	188	192	183	8	7	194	15	200	259	266	261	172	499
" 2.....	453	130	137	138	11	293	284	288	140	279	11	129	277	134	8	132	136	6	8	8	284	297	279	9	7	290	8	286	131	132	122	272	317
" 3. ..	438	57	57	58	10	366	357	362	70	361	7	54	349	56	4	56	54	10	6	8	361	358	358	6	9	357	10	353	57	53	53	354	187
Ward 5, Totals	1410	452	483	477	30	852	830	849	489	856	30	452	818	468	20	460	466	26	26	32	833	847	820	23	23	841	33	839	447	451	436	798	1003

WARD 6.																																
Precinct 1.....	476	154	149	158	40	239	230	236	157	246	32	156	235	165	26	157	153	27	31	35	238	234	240	25	31	233	21	239	147	141	146	217	698
" 2. .	528	214	222	227	20	264	255	272	225	264	15	219	262	229	12	227	210	17	15	17	259	253	260	14	16	259	15	251	218	218	215	245	399
" 3.....	508	111	117	112	13	365	354	366	119	360	13	110	352	107	5	116	106	15	11	10	359	356	363	8	14	357	12	359	110	107	109	358	314
Ward 6, Totals	1512	479	488	497	73	868	839	874	501	870	60	485	849	501	43	500	469	59	57	62	856	843	863	47	61	849	48	849	475	466	470	820	1411
WARD 7.																																
Precinct 1.....	521	72	76	72	18	416	404	420	79	411	20	73	408	67	10	82	65	15	14	9	413	407	401	13	11	402	10	409	65	63	65	402	339
" 2.....	594	306	307	306	12	230	228	241	307	227	11	321	224	307	5	322	296	7	13	10	233	227	223	11	12	234	18	233	301	297	300	227	538
" 3.....	535	185	182	186	27	303	298	309	182	304	24	179	307	181	16	191	171	14	16	16	297	295	301	19	18	293	19	294	170	171	170	286	461
Ward 7, Totals	1650	563	565	564	57	949	930	970	568	942	55	573	939	555	31	595	532	36	43	35	943	929	925	43	41	929	47	936	536	531	535	915	1338
WARD 8.																																
Precinct 1.....	378	111	108	113	5	250	242	254	109	245	6	109	236	106	5	113	107	6	4	4	244	241	238	5	5	243	8	234	107	113	104	234	249
" 2.....	469	116	118	122	7	320	316	317	120	311	4	116	303	118	6	126	115	5	5	5	319	301	313	4	3	320	6	308	114	114	107	308	392
" 3.....	502	334	339	341	9	129	112	126	350	121	3	345	115	333	5	348	330	5	4	5	131	109	117	5	2	132	10	116	331	330	334	113	438
Ward 8, Totals	1349	561	565	576	21	699	670	697	579	677	13	570	654	557	16	587	552	16	13	14	694	651	668	14	10	695	24	658	552	557	545	655	1079
WARD 9.																																
Precinct 1.....	629	117	121	120	4	486	478	486	122	475	5	117	474	112	5	133	113	10	9	5	491	468	471	6	7	476	9	477	115	108	106	471	322
" 2.....	644	296	299	298	12	306	308	304	304	301	10	303	295	291	2	301	292	7	9	12	306	291	295	8	7	301	15	294	287	279	286	294	471
Ward 9, Totals	1273	413	420	418	16	792	786	790	426	776	15	420	769	403	7	434	405	17	18	17	797	759	766	14	14	777	24	771	402	387	392	765	793
WARD 10.																																
Precinct 1.	449	69	67	70	9	362	352	360	78	354	7	70	348	66	10	71	68	5	9	7	360	353	356	5	6	359	8	357	65	62	62	353	211
" 2.....	554	294	294	289	7	238	231	253	291	234	9	283	231	283	13	286	281	8	5	11	236	226	225	6	6	231	11	228	278	270	269	236	328
Ward 10,Totals	1003	363	361	359	16	60	583	613	372	588	16	353	579	349	23	357	349	13	14	18	597	579	581	11	12	590	19	585	343	332	331	589	539
WARD 11.																																
Precinct 1.....	650	250	236	228	9	368	366	392	236	369	7	219	358	225	6	233	225	11	8	7	373	363	364	5	6	357	9	365	226	217	222	353	537
" 2.....	629	466	440	435	20	117	117	136	444	123	13	440	116	432	18	431	425	14	11	15	116	111	108	11	11	117	18	110	419	421	427	107	730
Ward 11,Totals	1279	716	676	663	29	485	483	528	680	492	20	659	474	657	24	664	650	25	19	22	489	474	472	16	17	474	27	475	645	638	649	460	1267
Grand Totals..	14,053	6403	6568	6470	463	6283	6093	6374	6671	6326	382	6423	6153	6430	282	6457	6363	316	345	401	6207	6080	6033	300	313	6152	442	6177	6181	6166	6259	5944	13,126

CANDIDATES FOR COMMON COUNCIL.

WARD ONE.

	Whole Number.	John J. Buckley.	Daniel G. Cunningham.	Daniel J. Dinan.	Arthur S. Fudge.	Daniel E. McCarthy.	William Ward.	Blank.
Precinct 1	480	38	23	365	55	326	56	97
" 2	419	23	24	267	84	266	87	87
Ward 1, Totals	899	61	47	632	139	592	143	184

WARD TWO.

	Whole Number.	James Harrington.	William W. Leonard.	James O. Murray.	Maurice Reardon.	Henry L. Walker.	E. A. Duffy.	Blank.
Precinct 1	501	317	67	107	256	109	1	145
" 2	405	267	53	68	243	79	...	100
Ward 2, Totals	906	584	120	175	499	188	1	245

WARD THREE.

	Whole Number.	Jeremiah F. Downey.	John J. Hertach.	James F. Quinn.	Thomas A. Scott.	Gustavus Wilson.	Blank.
Precinct 1	582	485	37	484	30	37	91
" 2	434	328	47	315	18	56	104
" 3	405	261	92	253	32	89	83
Ward 3, Totals	1,421	1,074	176	1,052	80	182	278

CANDIDATES FOR COMMON COUNCIL.

WARD FOUR.

	Whole Number.	Joseph M. Dunlea.	Francis W. Hancock.	Edward Morrison.	Michael J. Shea.	George H. Whippen.	Blank.
Precinct 1	440	242	16	130	280	75	137
" 2	398	132	30	195	147	202	90
" 3	513	144	31	288	156	293	114
Ward 4, Totals	1,351	518	77	613	583	570	341

WARD FIVE.

	Whole Number.	Sydney J. Monk.	Herbert A. Rhoades.	Joseph L. F. St. Cœur.	William B. White.	Blank.
Precinct 1	519	186	195	274	272	111
" 2	453	278	290	132	144	62
" 3	438	349	362	50	50	65
Ward 5, Totals	1,410	813	847	456	466	238

WARD SIX.

	Whole Number.	William H. Antle.	Solomon H. Barnard.	Edward E. Clark.	Frederick H. Haley.	Nels Sandberg.	Blank.
Precinct 1	476	156	241	242	151	35	127
" 2	528	206	270	259	215	22	84
" 3	508	104	356	360	113	12	71
Ward 6, Totals	1,512	466	867	861	479	69	282

WARD SEVEN.

	Whole Number.	William D. Berkeley.	George B. Caswell.	Julius Meyers.	Charles H. Millner.	Isaac L. Polack	Fred O. White.	Frank Hackett.	Blank.
Precinct 1	521	62	381	378	6	55	83	.....	77
" 2	593	307	209	212	7	61	282	1	107
" 3	535	173	279	281	10	55	176	.....	96
Ward 7, Totals	1,649	542	869	871	23	171	541	1	280

CANDIDATES FOR COMMON COUNCIL.

WARD EIGHT.

	Whole Number.	John P. Brennan.	Samuel D. Elmore.	George Stephens.	James H. Stokes.	Blank.
Precinct 1	378	110	247	242	107	50
" 2	469	121	316	315	121	65
" 3	502	362	123	114	335	70
Ward 8, Totals	1,349	593	686	671	563	185

WARD NINE.

	Whole Number.	Thomas Culhane.	John D. Gallivan.	Harry N. Stearns.	Charles Walcott.	Blank.
Precinct 1	629	109	112	490	481	66
" 2	644	291	282	314	311	90
Ward 9, Totals	1,273	400	394	804	792	156

WARD TEN.

	Whole Number.	Edward P. Clark.	William C. Coxon.	Howland Dudley.	John L. Dyer.	Blank.
Precinct 1	449	78	63	363	350	44
" 2	554	280	273	236	237	82
Ward 10, Totals	1,003	358	336	599	587	126

WARD ELEVEN.

	Whole Number.	Frank P. Edwards.	David J. Nelligan.	Thomas P. O'Neil.	Samuel H. Talbot.	Blank.
Precinct 1	650	369	224	220	400	87
" 2	629	120	438	439	145	116
Ward 11, Totals	1,279	489	662	659	545	203

CANDIDATES FOR SCHOOL COMMITTEE.

Names of Candidates.	At Large. Three years.					Ward 3. Three years.			Ward 4. Three years.			Ward 6. Three years.			Ward 11. Three years.			Ward 5. One year.		
	Whole Number.	Warren P. Adams.	John L. Flynn.	Edward B. Malley.	Blank.	Scattering.	James Frank Wentworth.	Scattering.	Blank.	Thomas H. Heaton.	Charles H. Williams.	Blank.	J. Henry Duckrey.	Mary E. Mitchell.	Blank.	William G. Brousseau.	Seth N. Gage.	Blank.	Edward P. Collier.	J. Henry Russell.	Blank.
Ward 1, Precinct 1	480	35	355	26	64		83	1	396	309	45	126	328	49	103	310	44	126	320	43	117
" 1, " 2	424	61	271	39	53		98		326	249	77	98	259	67	98	243	70	111	250	71	103
Ward 1, Totals	904	96	626	65	117		181	1	722	558	122	224	587	116	201	553	114	237	570	114	220
Ward 2, Precinct 1	504	67	332	30	75		103		401	297	72	135	304	75	125	288	68	148	301	70	133
" 2, " 2	406	50	275	39	42		75		331	262	55	89	272	60	74	251	52	103	260	51	95
Ward 2, Totals	910	117	607	69	117		178		732	559	127	224	576	135	199	539	120	251	561	121	228
Ward 3, Precinct 1	582	48	451	10	73		80		502	414	39	129	423	45	114	403	42	137	397	39	146
" 3, " 2	438	59	301	8	70		79		359	273	54	111	292	56	90	262	55	121	264	56	118
" 3, " 3	409	87	257	13	52		121		288	240	86	83	263	79	67	228	85	96	232	85	92
Ward 3, Totals	1,429	194	1,009	31	195		280		1,149	927	179	323	978	180	271	893	182	354	893	180	356
Ward 4, Precinct 1	446	93	247	15	91		105		341	249	90	107	263	83	100	221	84	141	227	83	136
" 4, " 2	420	220	152	9	39		231		189	144	222	54	146	205	69	132	208	80	130	207	83
" 4, " 3	569	321	159	17	72		333		236	157	335	77	162	317	90	141	314	114	146	320	103
Ward 4, Totals	1,435	634	558	41	202		669		766	550	647	235	571	605	259	494	606	335	503	610	322
Ward 5, Precinct 1	557	205	284	20	48		231		326	248	211	98	257	216	84	238	211	108	261	210	86
" 5, " 2	535	346	131	36	22		373		162	126	351	58	134	349	52	121	352	62	138	361	36
" 5, " 3	571	465	51	28	27		463		108	52	476	43	64	473	34	52	472	47	54	481	36
Ward 5, Totals	1,663	1,016	466	84	97		1,067		596	426	1,038	199	455	1,088	170	411	1,035	217	453	1,052	158

CANDIDATES FOR SCHOOL COMMITTEE.—*Concluded.*

Names of Candidates.	At Large. Three years.						Ward 3. Three years.			Ward 4. Three years.			Ward 6. Three years.			Ward 11. Three years.			Ward 5. One year.		
	Whole Number	Warren P. Adams.	John L. Flynn.	Edward B. Malley.	Blank.	Scattering.	James Frank Wentworth.	Scattering.	Blank.	Thomas H. Heaton.	Charles H. Williams	Blank.	J. Henry Duckrey.	Mary E. Mitchell.	Blank.	William G. Brousseau.	Seth N. Gage.	Blank.	Edward P. Collier.	J. Henry Russell.	Blank.
Ward 6, Precinct 1	505	270	145	12	78		250		255	132	249	124	178	253	74	131	233	141	132	240	133
" 6, " 2	562	290	207	20	45		286		276	188	273	101	215	285	62	186	268	108	193	274	95
" 6, " 3	579	426	100	8	45		422		157	93	412	74	105	420	54	86	408	85	92	410	77
Ward 6, Totals	1,646	986	452	40	168		958		688	413	934	299	498	958	190	403	909	334	417	924	305
Ward 7, Precinct 1	645	516	65	22	42		518		127	71	507	67	88	509	48	70	507	68	72	504	69
" 7, " 2	650	252	305	29	64		281		369	281	263	106	323	259	68	274	265	111	277	267	106
" 7, " 3	579	332	177	14	56		338		241	168	333	78	178	336	65	170	324	85	159	336	84
Ward 7, Totals	1,874	1,100	547	65	162		1,137		737	520	1,103	251	589	1,104	181	514	1,096	264	508	1,107	259
Ward 8, Precinct 1	435	279	106	19	30	1	285		150	96	279	60	107	276	52	95	278	62	100	275	60
" 8, " 2	570	403	105	23	38	1	420		150	108	404	58	117	399	54	102	405	63	110	406	54
" 8, " 3	526	134	336	11	45		136		390	335	116	75	345	113	68	321	119	86	324	116	86
Ward 8, Totals	1,531	816	547	53	113	2	841		690	539	799	193	569	788	174	518	802	211	534	797	200
Ward 9, Precinct 1	748	570	114	30	34		586		162	110	569	69	117	569	62	105	568	75	108	574	66
" 9, " 2	693	330	284	21	58		348		345	274	330	89	287	329	77	270	331	92	267	332	94
Ward 9, Totals	1,441	900	398	51	92		934		507	384	899	158	404	898	139	375	899	167	375	906	160
Ward 10, Precinct 1	518	421	64	21	12		436		82	67	421	30	70	421	27	71	422	25	67	426	25
" 10, " 2	636	290	283	13	50		313		323	269	286	81	283	292	61	294	286	56	272	288	76
Ward 10, Totals	1,154	711	347	34	62		749		405	336	707	111	353	713	88	365	708	81	339	714	101
Ward 11, Precinct 1	708	411	227	16	53	1	403		305	214	384	110	220	385	103	231	402	75	220	378	110
" 11, " 2	664	128	443	12	81		183		481	428	114	122	442	97	125	469	119	76	423	117	124
Ward 11, Totals	1,372	539	670	28	134	1	586		786	642	498	232	662	482	228	700	521	151	643	495	234
Grand Totals	15,359	7,109	6,227	561	1,459	3	7,580	1	7,778	5,854	7,053	2,452	6,242	7,017	2,100	5,765	6,992	2,602	5,796	7,020	2,543

CONTENTS

	PAGE
Mayor's Address	5
Report of Water Board	17
Registrar	25
Statement of Water Registrar to Committee on Accounts	30
Statement of City Treasurer	32
Superintendent of Water Works	33
Pumping Engineer	53
Superintendent of Streets	56
Board of Park Commissioners	81
General Superintendent of Parks	91
Landscape Architects	113
City Engineer	116
Acts Relative to the Extinction of Brown Tail Moth, etc.	118
City Electrician	120
Superintendent of Public Buildings	141
Inspector of Animals	158
City Treasurer	159
Commissioners of Sinking Funds	167
Committee on Finance	175
City Messenger	180
Trustees of Cambridge Public Library	183
Report of Librarian	185
Chief of Police	199
Trustees of the Bridge Charitable Fund	206
Trustees of the Dowse Institute	208
Inspector of Milk	209
Sealer of Weights and Measures	218
Overseers of the Poor	225
Superintendent of the City Home	230
City Physician	236
Trustees of Sanders Temperance Fund	237
Commissioner for the Boston and Cambridge Bridges	241
City Auditor	247
Schedules	251 to 275
Appropriations and Expenditures	276
Abatements, Taxes	277
Assessors' Department	277
Auditing Department	279
Board of Survey	280
Bridge Department	280
Cambridge Bridge	285
Cemetery Department	289
City Clerk Department	291
City Messenger Department	293
Civil Service Department	295
Clerk of Committees Department	295
Contingent Fund	296

PAGE

REPORT OF CITY AUDITOR — *Continued.*

Election Expenses: City Clerk 300
Registrars of Voters 302
Superintendent of Public Buildings 303
Electrical Department: Street Lighting 304
Wires 305
Engineering Department 308
Assessors' Plans 309
Executive Department 309
Fire Department 310
Health Department 314
Small-pox Hospital 316
Temporary Hospital 321
Inspection of Milk and Vinegar 322
Inspection of Provisions 323
Interest 324
Land Damages 325
Law Department 325
Overseers of the Poor Department 327
City Home Department 327
Farm Department 331
House Offal 333
Outside Aid Department 334
Park Department 338
Construction 338
Maintenance 344
Maintenance: Interest 349
Sinking Fund 349
Plumbers' Examiners' Department 350
Police Department 350
Public Library Department 353
Public Library, East Cambridge Branch 356
Public Library Addition 357
Public Property 358
City Buildings 358
Incidentals 361
Schoolhouses 362
The Armory, Beech Street 367
Land for Schoolhouse, Elm Street 368
New Schoolhouse, Ward One 368
New Schoolhouse, Ward Two 369
Rifle Range 369
Sanitary Arrangements, Schoolhouses 369
Voting Booth 370
School Department, Care of Truants 370
Flags 371
Incidentals 371
Salaries 372
Text-Books and Supplies 373
Transportation of Pupils 376
Vacation Schools 376

PAGE

REPORT OF CITY AUDITOR — *Continued.*
Sealer of Weights and Measures 376
Sewer Department 378
Construction 378
Improved Sewerage 379
Maintenance 381
Sinking Funds 383
State Aid 383
Street Department: Bridges 385
Cleaning 386
Collecting of Ashes 387
Construction, Belmont Street 387
Construction, Dudley Street 388
Construction, Granite Street 388
Construction, Munroe Street 388
Construction, Pleasant Street 389
Construction, Reed Street 389
Construction, Sherman Street 390
Construction, Sundry Streets 390
Maintenance 391–393
Macadamizing, Resurfacing, etc. 392
Paving 396
Rebuilding Bridge Street 398
Rebuilding Broadway 398
Rebuilding Brookline Street 399
Rebuilding Cambridge Street 400
Rebuilding Franklin and River Streets 400–401
Watering 401
Treasury Department 403
Water Works: Construction 404
Maintenance 408
Maintenance (Abatements) 417
Ice for Drinking Fountains 417
Interest on Water Loan 417
Maintenance (Refunds) 418
Sinking Funds 418
Receipts and Expenditures 419
RECAPITULATION 419
REAL ESTATE OWNED BY THE CITY 443
PROPERTY EXEMPT FROM TAXATION 450
Schedule of City Property 459
REPORT OF COMMITTEE ON ACCOUNTS 473
REPORT OF EXPERT ACCOUNTANT 474
SUBSIDIARY REPORT 488
REPORT OF BOARD OF CEMETERY COMMISSIONERS 519
CHIEF ENGINEER OF THE FIRE DEPARTMENT 523
CITY CLERK'S FEES AND LICENSES 553
SCHOOL COMMITTEE 554
CITY ENGINEER 621
BOARD OF HEALTH 640
REPORT OF BOARD OF SURVEY 664

PAGE

ORDINANCES PASSED BETWEEN MARCH 28, 1902, and JUNE 1, 1903 . . 671
Duties and Salaries 671–673
Invalid Tax Deeds 671
City Scales and Weighers 671
Construction, Maintenance, etc., of Buildings 672
General Regulations for Streets, etc. 672–673
Water Works 674
MAYORS, 1846–1903 675
PRESIDENTS OF THE BOARD OF ALDERMEN 675
PRESIDENTS OF THE COMMON COUNCIL 676
DIAGRAM AND KEY TO BOARD OF ALDERMEN CHAMBER . . . 678
DIAGRAM AND KEY TO COMMON COUNCIL CHAMBER 679
MUNCIPAL REGISTER 681
STATE AND CITY ELECTIONS, 1902, VOTES CAST AT 705

7929 .11
167